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Monitoring performance or performing monitoring?

The case of rural water access in Ethiopia

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A thesis submitted in December 2012 in partial fulfilment of the
requirements for the degree of

Doctor of Philosophy

University of Sussex

To my parents

UNIVERSITY OF SUSSEX

KATHARINA WELLE, PHD IN SCIENCE AND TECHNOLOGY POLICY STUDIES

MONITORING PERFORMANCE OR PERFORMING MONITORING? THE CASE OF RURAL
WATER ACCESS IN ETHIOPIASUMMARY

Performance monitoring is commonly portrayed as providing a uniquely objective, rational foundation for decisions, based on a single-stranded feedback loop between setting objectives and measuring results. In this thesis, I investigate whether this portrayal is accurate. I analyse whether the linear model underlying performance monitoring provides an adequate basis for understanding decisions about access to rural water supply in Ethiopia. My examination focuses primarily on the politics of knowledge production from three angles.

First, I examine whether the assumptions underlying the definition of ‘access’ to rural water used in performance monitoring in Ethiopia, adequately represent the divergent notions of access among the relevant actors. My findings show that formal framings of access, codified in national and international guidelines and benchmarks, focus on technical aspects of the water supply infrastructure. I bring to light that the goal of performance monitoring in relation to achieving ‘access’ is driven by the methods used to measure it, mainly the parameters of infrastructure, volume, distance and quality, suggesting a circularity between framings of the inputs to and objectives of appraisal. In this self-referential process, a particular image of the world determines the meaning of performance, which is used as a yardstick. The power of this dynamic is apparent in Ethiopian stakeholders’ characterisations of access, which, even when critical, revolve narrowly around these dominant parameters. This one-dimensional and technical framing of access, constantly reproduced in self-referential monitoring circles, contrasts starkly with the multi-dimensional and dynamic nature of the water access experiences of local residents in Ethiopia.

Second, I test whether, in reality, monitoring processes conform to the linearity assumed by the feed-back function of performance monitoring. The process tracing method used to illuminate the political and power dynamics of monitoring processes, shows that sector government actors at different administrative levels, with different rationales, provide different stories of ‘access’. Viewed from this perspective, performance monitoring can be seen not, as conventionally asserted, as a uniquely rational appraisal of performance, but rather as being about ‘performing monitoring’ – the playing out on a management stage of certain politically-necessary performances. At the same time, I find that numerous less formalised monitoring practices proceed in parallel with the formal PM process, which, together, form a body of largely ‘tacit’ knowledge that informs sector stakeholders’ daily work. It is this wider body of knowledge, rather than only formalised PM results, that informs decisions.

Third, I investigate the mechanisms that led to the formulation of specific decisions associated with rural water access and the role in these of performance monitoring. I find that particular decisions, such as repairs to rural water schemes, have multiple causes, among which performance monitoring is a contributory and necessary, but not sufficient factor. My investigation of criteria affecting budget allocations highlights that sector offices' limited control over them contributes to making strategic planning a rubber stamping exercise whose processes can be characterised as 'muddling through' as opposed to adhering to the linear model suggested by Results-based Management.

My findings highlight the need to break the self-referential cycle of narrowly framed performance monitoring exercises. They suggest greater attention to the 'tacit' monitoring practices in local settings, and a focus on the process of monitoring and the power relations within it, to complement the dominant focus on monitoring targets and indicators.

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Acronyms

AD	Anno Domini
AfDB	African Development Bank
AMIT	Arba Minch Institute of Technology
BoFED	Bureau of Finance and Economic Development
BoWR	Bureau of Water Resources
BPR	Business Process Reengineering
CBM	Community-based Management
CDF	Country Development Framework
CSA	Central Statistical Agency
CSO	Civil Society Organisation
DFID	Department for International Development
EPRDF	Ethiopian People's Revolutionary Democratic Front
ETB	Ethiopian Birr
EUWI	European Union Water Initiative
GLAAS	Global Analysis and Assessment of Water and Sanitation
GoE	Government of Ethiopia
HIPC	Highly-Indebted Poor Countries
IMF	International Monetary Fund
IRC	International Water and Sanitation Centre
IWMI	International Water Management Institute
IWRM	Integrated Water Resources Management
JICA	Japan International Cooperation Agency
JMP	Joint Monitoring Programme
<i>Kebele</i>	Ethiopian equivalent to a sub-district
LFA	Logical Framework Approach
l/p/d	litres/person/day

MDG	Millennium Development Goal
MfR	Management for Results
MoFED	Ministry of Finance and Economic Development
MoU	Memorandum of Understanding
MoWE	Ministry of Water and Energy (from October 2010)
MoWR	Ministry of Water Resources (until September 2010)
MP	Member of Parliament
MSF	Multi-Stakeholder Forum
MUS	Multiple Use water Services
NGO	Non-governmental Organisation
NPM	New Public Management
O&M	Operation and Maintenance
OECD	Organisation for Economic Cooperation and Development
OIOS	Office for Internal Oversight Services
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PBS	Protection of Basic Services
PIM	Project Implementation Manual
PM	Performance Monitoring
PRSP	Poverty Reduction Strategy Paper
PSNP	Productive Safety Net Programme
RBM	Results-Based Management
RWSN	Rural Water Supply Network
RiPPLE	Research-inspired Policy and Practice Learning in Ethiopia and the Nile Region
SNNPRS	Southern Nations, Nationalities and Peoples Regional State
SNV	Netherlands Development Organisation
STEPS	Social, Technological and Environmental Pathways to Sustainability
SWAP	Sector-wide Approach

UAP	Universal Access Programme
UK	United Kingdom
UN	United Nations
UNICEF	United Nations Children's Fund
US	United States
USAID	United States Agency for International Development
WASH	Water Supply, Sanitation and Hygiene
WB	World Bank
WHO	World Health Organisation
WME	Water, Mining and Energy
<i>Woreda</i>	Ethiopian term for local government area, equivalent to a district
WRI	Water Resources Inventory
WSG	<i>Woreda</i> Support Group
WWT	<i>Woreda</i> WASH Team

1 Introduction

It is 6 am in Mole, and the sun has yet to rise. Meselich is already in a queue - at the only one of the two water points in the local motorised scheme that produces good tasting water near her home. The day before she had sent her daughter to fetch water in the morning, but the girl had come back empty-handed because the borehole reservoir had run dry before it came to her turn in the queue. Today, she wants to make sure to get two jerry cans of water for her family of six, because she has almost run out of water for drinking and cooking. Although Meselich is irritated that collecting water from the borehole continues daily to be a gamble, she is grateful that the scheme has been repaired. The month before, the family was obliged to pay local traders, who were transporting water from the next town by donkey cart, ten times the fee she currently pays to the tap attendant. Although the situation has improved, she does not trust the water committee who failed to operate the water scheme on several occasions in the previous weeks on the grounds that there was no fuel to feed the pump to get the water into the reservoir. There are constant rumours of funds being misused by the committee; and every day she faces the worry of whether her turn in the queue will arrive before the water runs out. What she wants is a household connection, something that her husband and others raise repeatedly at meetings with government officials.

Meselich is not the name of a real woman. I have adopted it to present a tale, common in the densely populated lowland settlements in my fieldwork location in the Southern Region¹ of Ethiopia. Despite Meselich's story being a common experience, this reality does not feature in the official data on access to rural water supply of my fieldwork *kebele*, the lowest administrative unit with salaried staff in Ethiopia, covering an area that officially counts 5,800 dwellers. According to the federal Ministry of Water Resources (MoWR) calculations for the

¹ The region's full name is Southern Nations, Nationalities and Peoples Regional National State; throughout this thesis I use the term Southern Region.

same *kebele* in 2010, 70% of the population had access to water supply. Ministerial rural water access figures for the country as a whole were reported as 65.8% in 2010 (MoWE, 2010), while, according to the global Joint Monitoring Programme (JMP) on water and sanitation (2012b), rural water access reached 34% in the same year. The divergence in the perceptions and figures for access to water supply in the *kebele* and in the country is puzzling. It is also disconcerting given that, in Ethiopia's rural water sub-sector reform processes, great attention has been paid to improving monitoring since 2006, on the underlying assumption that performance monitoring (PM), ultimately, will translate into better access to rural water supply. The emphasis on PM in Ethiopia is upheld by the global aid architecture and represented globally in the striving to achieve the Millennium Development Goals (MDGs).

PM refers to measurement of 'results' as opposed to the inputs and activities related to an intervention (OECD, 2010). PM is part of Results-based Management (RBM), a public management model that focuses on the achievement of measurable results. Measuring results is key to public sector reforms aimed at 'reinventing government', the title of a book by David Osborne and Ted Gaebler (1992) published in the early 1990s. In their book, Osborne and Gaebler (1992: 146) circumscribe the value of measuring results using the following logic:

If you do not measure results, you cannot tell success from failure.
 If you cannot see success, you cannot reward it.
 If you cannot reward success, you are probably rewarding failure.
 If you cannot see success, you cannot learn from it.
 If you cannot recognize failure, you cannot correct it.
 If you can demonstrate results, you can win public support.

According to this logic, measuring results serves as an objective means to demonstrate the success (or not) of an intervention. PM is presented as a rational means for informing robust policy decisions and, based on that, for increasing public accountability. However, this common presentation of PM is at odds with the situation I have described above, which relates

to a specific development result, access to rural water supply, in a local setting. In this setting, my fieldwork *kebele*, the figure of 70% to describe the development result of rural water 'access' does not capture the reality that Meselich faces in her daily effort to obtain water – the long queuing times, the uncertainty as to whether she will return home with a full jerry can of water, and her mistrust in the capacity of the local committee to operate the scheme effectively. Furthermore, the Federal Ministry and the global monitoring programme, the JMP, present different water 'access' figures for Ethiopia. It is this puzzle that is at the heart of my thesis. How can we explain these divergent interpretations of access to water supply in my fieldwork *kebele* and Ethiopia as a whole? What does this divergence mean for the robustness and credibility of PM processes and their results? Is PM the uniquely rational, objective process that it is claimed to be? Do monitoring results inform decisions on rural water access in Ethiopia? In this thesis, I critically examine these questions.

1.1 Why focus on performance monitoring?

Why focus on PM in the first place? Could it be that the situation I described above is a one-off example that does not represent current trends in development cooperation? My personal observations when working on issues related to governance of water and sanitation across Sub-Saharan Africa prior to embarking on this thesis research do not confirm this. My observations point to increased attention to PM in the water and sanitation sub-sectors. For example, in 2009, there were 11 parallel monitoring initiatives, of different scope and with different foci, based on information management related to Water Supply, Sanitation and Hygiene (WASH) in the Southern Region of Ethiopia, the region where my case study is based (Butterworth *et al.*, 2009).

This large number of monitoring activities at the operational level mirrors national and international level trends in development cooperation. Elements of PM have been part of

delivering aid since the introduction in the 1970s of the 'logical framework' approach (Rebien, 1996, Cracknell, 2000, Hailey and Sorgenfrei, 2004). The global declaration of MDGs in 2000 promoted the measurement of results to a new level, making it pervasive on the political agenda. Tracking performance was further reinforced under the banner of 'Aid Effectiveness', which determines donor-recipient relationships, particularly in highly aid-dependent countries, such as Ethiopia (OECD, 2005). One of the five pillars identified as increasing the effectiveness of aid is "managing resources and improving decision-making for results" (OECD, 2005: 7). This reflects the logic in the quote from Osborne and Gaebler (1992) that the introduction of results-based monitoring enables policy makers to measure and reward success, which ultimately increases the effectiveness of aid, and its accountability. The related global target for drinking water, to "halve, by 2015, the proportion of people without sustainable access to safe drinking water" (UNSD, 2008) is represented in the MDG 7c.

As a consequence of the global aid effectiveness agenda, performance measurement has become crucial for all water supply, sanitation and hygiene interventions in countries heavily dependent on aid. This is apparent at various levels. At the national level, many of these countries have embarked on sector reform processes that entail the establishment of PM systems as a key element of reform. An early example of this is the set of 'golden indicators' of performance, developed in Uganda in the early 2000s by the then Ministry of Water, Lands and Environment (Pinfold, 2006). Also, a review by the World Bank's (WB) Water and Sanitation Programme on progress in monitoring performance in the rural water supply sub-sector across 33 Sub-Saharan African countries, found that, between 2006 and 2010, 15 countries had reviewed their performance and set new undertakings, 10 countries had reviewed their progress, but not set new targets, and 8 countries had not undertaken any PM of their rural water supply (WSP, 2011: 78). Ethiopia is included in the second set of countries: setting up a Monitoring Information System for WASH has been a key sector reform undertaking discussed in sector multi-stakeholder forums since 2006 (MoWR and EUWI, 2006).

While figures on access are presented regularly at these forums, until 2010, during the time of my fieldwork in Ethiopia, they were not used as a basis for strategic review of sector activities.

PM is high on the United Kingdom's (UK) agenda for aid allocated to WASH. For instance, in April 2011, Alan Duncan MP, the then Minister of State for International Development, emphasised the importance of measuring the results of the sector interventions of his department, in a keynote address to the 6th Annual WASH Forum addressing UK non-governmental stakeholders (ODI, 2011). The importance put on performance measurement in the UK is apparent also in an internal WASH portfolio review, which focuses on measuring results, cost effectiveness, and value for money in relation to the Department for International Development's (DFID) interventions in the sector (DFID, 2012b) and in the Department's results framework established in 2011 to monitor and manage its progress (DFID, 2012a).

As mentioned above, international PM of development results is represented by the MDGs. The JMP of the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), cited above, has a mandate to measure progress towards MDG 7c, related to water supply and sanitation (WHO and UNICEF, 2010). At this level, the focus is shifting to 'post-MDG' monitoring. To this end, the JMP recently launched a consultative process to develop 'post-MDG' indicators (WHO and UNICEF, 2012e). I discuss these developments in more detail in Chapter 3, where I trace the history and theoretical underpinnings related to PM, and return to this discussion in Chapter 9, where I reflect on my findings in light of current developments in global sector monitoring.

The importance of PM related to water supply is apparent not only in efforts to introduce such frameworks at the national and international levels but also in the manifold technical innovations to improve monitoring. In the rural water supply sub-sector, non-governmental organisations (NGOs) and research institutions are at the forefront in trialling new tools to improve information on the distribution and sustainability of rural water supply schemes. For

instance, the NGO WaterAid has developed the Water Point Mapper software, an Excel-based tool that maps the spatial distribution of water supply schemes, their functionality status, and various other parameters (WaterAid, 2011). Complementing this, the NGO Water for People is testing a methodology called Field Level Operation Watch, which is a hand-held mobile device intended to project data on the functionality of water supply schemes, onto Google Earth maps, via android mobile phones (Water for People, 2012). A similar initiative called 'M4W'(Mobile Telephones for Improved Safe Water Access) is currently being piloted in Uganda by IRC² in collaboration with Makerere University and other stakeholders (IRC, 2012). The Geography Department at Oxford University is experimenting with the design of smart hand-pumps in Kenya. Equipped with data transmitters via a technology that is similar to mobile phones, these devices alert technicians about pumps experiencing problems (University of Oxford, 2012).

Together, the enhanced efforts to improve results-based monitoring by aid recipient governments, donors, the global monitoring programme JMP, and among NGOs and academic institutions, and current discussions around post-MDG monitoring are a clear indication of the strong interest in increasing the evidence base on the performance of rural water supply.

1.2 The nature and contribution of my investigation

There is no doubt that, in principle, PM has an important role to play in the assessment of both public and private sector programmes. Proponents of PM point out that the use of results-based frameworks allows implementers to focus their interventions on specific goals (Hailey and Sorgenfrei, 2004). An example for this is global monitoring towards the eradication of

² IRC stands for International Water and Sanitation Centre

guinea-worm, a water-related disease.³ The WHO's monitoring of reported guinea-worm infections in relation with a global programme to eradicate the disease shows that cases of transmission in 2012 are confined to 4 rather than the 20 countries in 1990 (WHO, 2012a). Results-based monitoring has the potential to highlight issues for policy and practice that might otherwise remain hidden. For instance, displaying the spatial distribution of rural water supply access across a district potentially can uncover inequitable distribution of services (Welle, 2007a). However, given the emphasis on PM in development cooperation in general, and in rural water supply in particular, as outlined above, surprisingly few voices critically engage with the concept of PM. Generally, discussion stops with the criticism of a particular indicator, or the effectiveness of a technology or method for improving PM (Hailey and Sorgenfrei, 2004). An exception is the development policy analyst David Booth, who, in a recent draft working paper on the political economy of aid effectiveness, postulated that “the ‘results agenda’ is wide open to the accusation that it is just about manufacturing fig leaves to cover the embarrassing bits of public expenditure on international development” (Booth, 2011: 8).

A key contribution of my thesis is that it opens a space for critical engagement with PM, and particularly the common assumption that it provides a uniquely rational means for informing robust policy decisions, by making the politics of knowledge production the centre of the investigation. My investigation starts with the apparent mismatch between Meselich's story and official performance-related figures for rural water access in her locality, and for Ethiopia.

My strategy for opening a discussion space is based on the connotations of the word ‘performance’. According to the Oxford English Dictionary, the definition of ‘performance’ has two meanings: First, performance is described as “the process of performing a task or

³ Guinea-worm is transmitted to humans exclusively by stagnant water contaminated with tiny water fleas that carry the infective guinea-worm larvae. Inside the body, the larvae mature into worms that can grow to up to 1 metre in length.

function ... i.e. in terms of how successfully it is performed". Second, it is "the act of presenting a play" (Oxford Dictionaries, 2010). In the first meaning of the word, 'performance' is about the success with which a particular task is executed; in its second meaning, 'performance' is the act of showcasing something, an act of stage management. While in the first case, reality is seen as measurable in an objective manner based on performance indicators, in the second case, reality is a subjective act of performance that is presented to an audience. In the first meaning, the assumption is that we can objectively measure an achievement, represented by aggregate figures on rural water access. However, the gap between Meselich's experience of access to rural water and the two, in themselves different, interpretations represented by the official percentages describing the same access situation, cast doubt on the objectivity and linearity of PM. At the core of my thesis research is a question that rests on these two meanings of 'performance': is it entirely what it seems to be – about objectively monitoring performance – or, are we also presented with the act of performing monitoring, in the sense of the theatre metaphor? It is this question that is reflected in the title of my thesis: "*Monitoring performance or performing monitoring?*"

1.3 Situating my thesis in the field of water studies

The way societies engage with water has changed over time as have the perspectives of scholars who study the water-society nexus. In the past, water related knowledge predominantly was influenced by the technical and natural sciences (Molle *et al.*, 2008). During much of the 19th and 20th centuries, a key paradigm was the notion of the 'hydraulic mission' (Allan, 1999, Swyngedouw, 1999, Molle *et al.*, 2009), the taming and domination of nature through the expansion of infrastructure. Marc Reisner (1986), for instance, documents this approach in relation to the history of dam construction in the American West, and Erik Swyngedouw (1999) discusses the role of water engineering in Spain's modernisation process. While the paradigm of the 'hydraulic mission' has since been challenged by alternative views

on the interrelation between water and society (see below), it is worth noticing that a focus on technical and engineering aspects is still apparent today, including in global monitoring of water access under MDG 7c, an issue that I discuss in Chapter 6, on water access framings.

As indicated above, meanwhile, various authors have proposed alternative views on technical solutions to water issues. Leif Ohlsson (1999, cited in Turton, 1999: 7) and Anthony Turton (1999), for instance, draw attention to the aspect of societal 'adaptive capacity' to overcome environmental, or what is often called 'first-order' water scarcity. Tony Allan (2003) argues that, starting from the 1980s, environmental and economic concerns entered the water discourse and since the turn of the 20th century, increased attention was given to the political and institutional dimensions related to the management of water resources. Other authors draw attention to social equity and distributional concerns, and highlight that the discursive nature of 'water scarcity' neglects factors that mediate access, such as power relations, gender, caste, class and feudal legacies (Mehta, 2006).

In line with Tony Allan's observation, a growing body of literature in water studies makes reference to water governance. The idea of 'effective water governance' entered the water sector mainly via the concept of Integrated Water Resources Management (IWRM) (Rogers and Hall, 2003). IWRM, which takes the hydrological unit as a starting point for integrating environmental and societal needs in water resources management, has been widely embraced for offering a normative approach that invites multiple actors to reach a consensus on sustainable resource use (Saravanan *et al.*, 2009). However, critics have argued that the IWRM 'toolbox' (GWP, 2008) relies on a rather technocratic and managerial understanding of governance for guidance on how to overcome governance failures. The discourse around IWRM has been characterised as a "narrowly instrumental debate" (Cleaver and Franks, 2008: 161) and criticised for reinforcing the established worldviews of incumbent actors rather than critically engaging with the politics and power relations inherent in water management (Molle,

2008). Others regard IWRM as a “vague and fuzzy concept” that is difficult to implement in practice (Biswas, 2004 cited in Mehta *et al.*, 2007: 23).

Other scholars engage explicitly with the political and power dimensions of water governance. Janelle Plummer and Tom Slaymaker (2007) draw on different political economy-related conceptual frameworks to analyse the governance of rural water services. David Edelmann (2009) reviews political economy concepts from the perspective of sector reform processes, while Frances Cleaver and Tom Franks (2005, 2008) developed alternative analytical framework to study the concrete outcomes of water governance on poor peoples’ access to this resource. Among journals in the water studies field, the open-access online journal *Water Alternatives*, launched in 2008, focuses explicitly on questions related to power and political economy in the field, by “opening up the black-box of governance” and “unpacking discourses and their expression of particular configurations of power” (Molle *et al.*, 2008: 4). The journal intends to foster a scholarship focusing on the ‘political sociology of water resources management’ whereby ‘political’ refers to “the contested nature of water resources management” and ‘sociology’ means the “study of social behaviour and interaction and of social structure” (Mollinga, 2008: 11). The journal’s focus is shared by the STEPS⁴ Centre’s water domain, which, in its first working paper, calls for “knowledge politics, issues concerning a wider political economy and politics of framing” (Mehta *et al.*, 2007: 32) to be at the centre of water and sanitation governance debates. It is in this body of research in the field of water studies that my thesis is situated: the study of the politics of knowledge production with a view to explicitly addressing the power relations and political dimensions related to water supply and water resources management.

In natural resources management, political ecologists have a tradition of addressing resource struggles as struggles over access and struggles over meaning (Peet and Watts, 1996 cited in

⁴ STEPS stands for ‘social, ecological and environmental pathways to sustainability’

Mehta *et al.*, 2007: 8). The authors Jesse Ribot and Nancy Peluso (2003: 154) conceptualise ‘access’ to natural resources as an analysis of “who actually benefits from things and through what processes they are able to do so”. Their analysis focuses on the material, cultural and political-economic manifestations of power relations that govern natural resource access. Various political ecologists have challenged the established knowledge-power configurations concerning environmental management and change. Well-known topics include questioning the fuel-wood crisis phenomenon, hitherto perceived as a main cause of deforestation in Africa (Leach and Mearns, 1996, Fairhead and Leach, 1998), and challenging predominant narratives related to agricultural science, the model of increasing output and productivity, and of agricultural policy as a ‘main engine of economic growth’ with alternative perspectives based on principles of agro-ecology and participation (Thompson *et al.*, 2007).

In the field of water studies, scholars, *inter alia*, have challenged common perceptions such as Malthusian concerns over future water wars contained in the idea of water scarcity-induced armed conflicts (Allan, 1998), water pricing, and markets as a precondition for efficient water allocation and management (Molle, 2008, Boelens and Vos, 2012), unpacked political concepts such as the aforementioned ‘hydraulic mission’ as a symbol for nation building and a tool to legitimise state power (Molle *et al.*, 2009), and brought to light ‘discursive framings’ underlying agricultural water management projects and policies (Venot and Krishnan, 2011).

Within the body of work on the knowledge-power configuration in water studies, my entry point is the topic of appraisal –“how knowledge about water and sanitation is gathered to inform decision making and wider institutional arrangements” (Mehta *et al.*, 2007: 3). I start from the proposition in the STEPS Centre’s Working Paper on Liquid Dynamics (Mehta *et al.*, 2007) that an important entry point for critically assessing the politics related to water issues is to increase the reflexivity of how problems are framed and appraised, whose views they represent, and whose concerns are left out. When analysing past appraisals related to water,

Lyla Mehta and colleagues (2007) observe that, for instance, with regard to large dams, assessments have focused on designs that primarily draw on economic and monetary dimensions, such as cost-benefit analysis, at the expense of social and environmental concerns. They highlight also that appraisal designs, such as cost-benefit analyses, foster a one-dimensional and polarised view of policy options – either for or against the construction of a specific dam – rather than considering a range of alternative technological and policy pathways. Such appraisal designs rest on an ostensibly unitary and single view of technological progress and fall short of questioning which directions of progress are desirable for society (Stirling, 2009).

A notably positive development in relation to the appraisal of large dams is the World Commission on Dams (2000), a multi-stakeholder dialogue that was set up to examine different social, economic and environmental impacts of past dam projects, and to devise guidelines for future decision making processes related to water and energy needs. However, there are indications from a recent revisit of the dam debate in the literature (Moore *et al.*, 2010), and, from Ethiopia, that the appraisal of large dam projects currently underway, do not take account of this analysis or make use of the decision-making principles suggested by the Commission (Bosshard, 2012).

Several authors concur that appraisal designs, including sector monitoring information systems, are predominantly geared to the information needs of political and administrative elites. De Kadt (1994), based on an analysis of the use of information for public policy decision making in Chile and Brazil, observed that such information systems reflect the views of those at the top of the hierarchy who determine the design, collection, analysis and use of information. Findings from a National WASH Inventory that was carried out between 2010 and 2011 in Ethiopia, confirm that the information needs of actors at the lower level of the hierarchy such as local government water and sanitation staffs remain an afterthought in the design and

implementation of large-scale sector surveys (Welle *et al.*, 2012). At the same time, designs that explicitly attend to the voices of poor and marginalised groups such as participatory forums, can equally raise questions of representation and may fail to reframe existing debates (Scoones and Thompson, 2003).

Others draw attention to the related politics inherent in appraisal processes, for instance, defining of the subject matter and determining related parameters such as indicators. Jessica Budds (2009) explores the politics inherent in scientific appraisal processes related to water resources management based on a hydrological assessment of a small river basin in Chile. She finds that the scientific appraisal she studied drew exclusively on physical parameters to assess a socio-political situation, thereby reinforcing established, unequal patterns of resource use. Another example, which I discuss further throughout the thesis, is the indicator for ‘access to drinking water’ in the MDGs. The indicator for measuring sustainable access to safe water refers to using an ‘improved’ source, begging the question of who this definition represents and how such global standards are arrived at. According to Mehta (2005), the notion of an ‘improved’ source is contentious based on her findings for Western India where local villagers prefer water from local ‘unimproved’ wells to ostensibly ‘improved’ water supply schemes provided by government. More generally, Francois Molle and Peter Mollinga (2003: 534), in a review of water poverty indicators, point out that indicators are in danger of becoming ‘black boxes’ that conceal problems such as poor data quality, loss of meaning in the process of aggregation and arbitrariness of weighting. Importantly, the authors conclude their review with the proposition that the use and impact of indicators on policy making “remain[s] a subject on which little is known and which deserves further investigation” (Molle and Mollinga, 2003: 543).

My thesis is one such investigation. As stated above, this thesis critically examines the common assumption that PM provides a uniquely rational means for informing robust policy

decisions, drawing on the case of rural water access in Ethiopia by asking: what role does performance monitoring play in shaping policy decisions on rural water access in Ethiopia?

I investigate the dynamics related to PM from three angles: first, I test whether PM, as practised in Ethiopia's rural water sector, reflects the ways in which different people understand and experience rural water 'access', through the question: What are the specific ways in which key actors (those affected and those implementing) at different levels (individual, *kebele*, *woreda*, zone, region, federal and international) frame access to rural water? My main enquiry here relates to whether 'access', as framed within PM, responds to the concerns of water users and implementers.

Second, I investigate in depth specific PM processes to understand the political and power dynamics that result in some framings of 'access' being suppressed and others coming to the forefront, embedded in the question: Which actors' framings are represented in monitoring exercises and results concerning rural water access?

Third, I test the relationship between monitoring results and the decisions taken about access to rural water supply by asking: What is the explanatory power of PM in decisions taken on rural water access?

The above short and, necessarily, incomplete exposé of the literature in the field of water studies makes it clear that my analysis does not start from a blank sheet. As illustrated by contributions from political ecology more generally and from the field of water studies in particular, many scholars already critically engage with the politics of knowledge production. The unique entry point of my study within this wider body of work is its focus on PM (performance monitoring) and its setting within the wider aid effectiveness agenda. My theoretical approach, which I explain in depth in Chapter 5, is primarily informed by scholars

who analyse ‘performance’ from the perspective of the politics of knowledge production and on work in the field of science and technology studies. My theoretical framework is based on the STEPS Centre’s approach to ‘social appraisal’. My thesis refines and elaborates some of its related conceptual aspects.

Below, I explain the scope and limitations of my study. I outline key debates related to rural water access that inform my thesis but whose in depth examination is beyond the scope of this thesis. I explain my focus on rural water supply and the choice of Ethiopia as a case study. Finally, I provide some clarification regarding my understanding and use of the term ‘performance’ in this thesis.

1.4 Scope and limitations of my investigation

Water is a life-sustaining source which has many facets: it is key to the functioning of the earth’s ecosystems as well as those of the human body; it plays a crucial role in subsistence and market-based livelihoods; it is important as a source of spirituality and is crucial for human health, recreation and well-being (Mehta, 2006, Molle *et al.*, 2008). In the ‘water’ sector, people often draw an arbitrary line between ‘water for life’, relating to the supply of water, the removal of wastewater and the provision of sanitation, and ‘water for livelihoods’, which refers to water for productive purposes (UNDP, 2006, Mehta *et al.*, 2007). However, as the multi-faceted nature of water outlined above indicates, the distinction between domestic and productive uses is a mainly bureaucratic one that does not match peoples’ daily lived experience. Since the subject of this thesis – PM – is situated in the public sector I need to follow the existing fault-lines. The scope of this thesis research is a sub-aspect of the water domain, PM of basic access to rural water supply, which refers to the use of water for domestic purposes. According to the WHO, the most basic level of access covers drinking

water, and water for food preparation and basic hygiene (Howard and Bartram, 2003).⁵ The scope of my analysis of PM processes is thus limited to monitoring of rural water access; it does not include monitoring of sanitation and hygiene and monitoring of access to water in urban areas.

From a historical perspective, debates on access to water tend to mirror wider debates in the water domain. From the 1950s to the 1970s, provision of water supply was centralised and driven largely by hardware issues (Wallace and Coles, 2005). Supply management of drinking water infrastructure was seen as the main approach to advancing human development in the countries of the southern hemisphere. These technologies were provided by engineers via stand-alone infrastructure projects focusing on the technical dimensions of provision (Harvey and Reed, 2004). In the 1980s, there was a growing realisation that Southern governments were not in a position to operate and maintain the infrastructure that had been put in place. Two paradigms led to the promotion of community management of water supply infrastructure via water user committees.

The notion of 'small is beautiful' (Schumacher, 1973), prevalent in the voluntary/NGO sector, suggests that management of infrastructure is more sustainable if devolved to the local level.

This wider notion was complemented by a growing movement towards 'community-based

⁵ Water supply is one of the group of basic services that includes health and education. There are various interdependencies between these sectors for achieving development outcomes. For instance, there is evidence that school attendance drops because girls and boys may need to spend time collecting water, because sanitation facilities are inadequate, or because of sickness due to water-related diseases. At the same time, school curriculae often include hygiene education. Also, the health benefits for users of improved water sources are very dependent on improved sanitation and hygiene practices (Curtis 2003; Bartram and Cairncross 2010), which are promoted by health extension staff. This results in water supply interventions often being lumped together with sanitation and hygiene activities in many aid dependent countries (Water, Sanitation and Hygiene = WASH). At the same time, household sanitation and hygiene are generally policy areas within the health sectors of aid recipient countries. This is the case in Ethiopia, where the promotion of sanitation and hygiene is part of the country's health extension programme (MoH 2006), managed by the health sector. During my fieldwork in 2009/10, water supply, sanitation and hygiene activities were monitored by separate ministries based on different systems, processes and personnel, although ongoing sector reform processes were intended to bring them together under a common WASH monitoring system. Therefore, while being mindful of the overlaps among basic services, my focus on PM is on rural water supply.

natural resources management', which emphasises the participation and centre stage of local communities in natural resources management (Mollinga, 2010b: 420-1, citing Menon, 2007) . At the same time, economic notions of efficiency promoted under the Structural Adjustment Programmes of the Bretton Woods Institutions favoured a leaner state achieved through decentralisation and privatisation, and the commoditisation of resources (Finger and Allouche, 2002). Such economically induced rationales took hold in the water sector via the Dublin Principles. Agreed upon at a conference leading up to the 1992 Earth Summit (UN, 1992), this major shift in doctrine refers to the fourth principle, which makes explicit reference to the economic value of water (Nicol *et al.*, 2012).

In rural water supply, one of the consequences of the above ideological shifts towards economic and market-driven approaches and towards community management has led to the outsourcing of infrastructure Operation and Maintenance (O&M) from state to local water user committees (Wallace and Coles, 2005). This same paradigm shift led also to the introduction of water demand management, which requires communities to express their keenness for water supply projects by contributing to the capital costs of the infrastructure provided. According to this logic, expressing 'demand' via a monetary contribution increases local ownership and the sustainability of water supply projects (Dongier *et al.*, 2002). Despite substantive criticisms, which are outlined in Chapter 2, and reports of low rates of sustainability in water schemes, the model of Community-based Management (CBM) continue to prevail in 2012. Non-functionality of rural water schemes across Sub-Saharan African countries, for instance, was judged to range from 30% to 65%, based on estimates and studies conducted between 2003 and 2009 (RWSN, 2009). Wider political and institutional shortcomings related to the operationalisation of CBM affect the functionality of rural water schemes across the world. An issue related to PM is that sector actors see improved monitoring as a panacea that will increase performance in real terms, while, in reality, the sustainability of water schemes is strongly dependent on the wider institutional and political

factors embedded in the sector. An in-depth discussion of these issues is beyond the scope of this thesis, but I make reference to these issues in various chapters.

In very general terms, since 2000, governance factors have been widely recognised in global water assessments as affecting access to water (UNDP, 2006, UNESCO, 2006). An indication of this is that, in 2010, access to water was recognised as a human right (UN, 2010). The human right to water, which I discuss in the context of ‘access’ framings in Chapter 6, led to increased attention on issues such as equity, distribution and sustainability.⁶ At the same time, a broader paradigm shift in the aid sector from ‘getting the prices right’ to ‘getting the institutions right’ fostered a generation of public sector reforms to increase the effectiveness of aid, which is still underway in 2012 (Hyden, 2005). The rise of performance monitoring of public sector programmes is one of the consequences of the current attention to these governance and institutional issues.

An important reason for choosing Ethiopia as a case study was the country’s exposure to these latest developments in the aid sector. Ethiopia has a long history of development assistance going back to the famine relief efforts in the 1970s. It receives large amounts of external assistance from bilateral and multilateral donors, and from NGOs, and is in the group of highly indebted poor countries. Ethiopia exhibits complexities typical of development assistance related to large volumes of aid, questions of ownership, and parallel systems and procedures, precisely the issues that the aid effectiveness agenda intends to tackle via increased attention to PM. In addition, Ethiopia’s population of over 80 million makes it the second most populous country in Sub-Saharan Africa after Nigeria.

⁶ Despite these reforms, sector analysts comment that the water sector “is still to a great extent [] driven by investments in technological innovations and development of infrastructure to increase water supply” (Tropp, 2007: 20).

As cited above, according to the Ministry of Water and Energy, Ethiopia's access to rural water supply stood at 65.8% in 2010. According to the global monitoring programme JMP, rural water access reached 34% in the same year. Linked to the discrepancy between the access figures provided by different sources, official access figures are a highly contested area in the sector, with critical voices coming from within the sector administration itself and from actors outside the administration, namely sector NGOs and donors. Consequently, a key undertaking in the current sector reform processes is improved monitoring with the intention of bringing together water, sanitation and hygiene-related monitoring processes, in the water, health and education sectors, under a common WASH monitoring system.

The wider complexities of aid delivery in Ethiopia are also evident in the country's rural water supply sub-sector. External assistance to the sub-sector exceeds internal funding for rural water supply. A mixture of bilateral and multilateral donors and NGOs directly support the rural water supply sub-sector, while there are also multi-sector multi-donor programmes in which water supply is one of several basic services. Consequently, decisions to improve access to water supply are subject to pressure from various stakeholders; the policy process is messy and there are real gaps in financial and human resources which limit the implementation of monitoring and follow up on its results in practice.

Ethiopia is often referred to as an authoritarian state (Vaughan and Tronvoll, 2003, Abbink, 2006b, Clapham, 2009). This may provoke the question whether studying PM in such a political context is appropriate, since public debates related to policy processes, of which PM forms part, may be confined mainly to contestations within the state apparatus (Mollinga, 2010a)? I argue that studying PM in Ethiopia is appropriate, because PM dynamics go beyond internal state dynamics; they are part of a wider aid effectiveness context to which Ethiopia is subject. In addition, my analysis focuses primarily on how PM is practised, and less on the setting (country-context) in which these processes unfold. Finally, my findings provide evidence of

contestations over rural water supply implementation from within and beyond the state structure, which highlights that PM-related debates are not entirely ‘closed’ in Ethiopia.

The thesis draws on insights across all administrative levels of Ethiopia. Below the national level, my case study material is based on research in the Southern Region based on prolonged field work periods at the regional capital, Hawassa, and in two *woredas*. Throughout the thesis, I make reference to interviews and focus group discussions via numbers that are linked to confidential annexes 3 and 4 (only made available to the thesis examiners).

My study has various limitations. As discussed above, I only deal with a sub-aspect of the water domain – rural water supply – at the expense of other water-related aspects. Although ‘access’ is in the title of this thesis, my analysis makes reference to, but does not focus on the, already well researched, access debates *per se*. Yet, via its focus on the politics of knowledge production related to rural water access, my thesis builds on Ribot and Peluso’s (2003: 154) above cited conceptualisation of ‘natural resources access’ as mediated by “bundles” and “webs” of power. The lens of this thesis is on PM (performance monitoring) and therefore neglects other important types of appraisal activities during the project cycle such as baseline studies and supervision. Furthermore, I analyse mainly government monitoring activities, because these are most relevant to the aid effectiveness agenda, which is at the expense of donor, NGO and community-based monitoring practices. Furthermore, my insights in the political dynamics of water access monitoring in Ethiopia are mediated by language and cultural barriers, which I have, as much as possible, addressed as explained in Chapter 5.

Finally, in this chapter I want to provide some clarification on how I approach PM in this thesis. PM does not specify ***a particular set of methods or indicators*** for measuring results. The situation could be assessed in different ways leading to divergent results, highlighted by Meselich’s story of access to water supply presented at the beginning of this chapter.

In referring to PM, I mean any monitoring practice aimed at measuring results. This understanding of PM is based on the definition in the OECD *Glossary of key terms in Evaluation and Results-based Management* already introduced. In Ethiopia, the government, bilateral and multilateral donors and NGOs all monitor the results of their rural water interventions although not all make explicit use of the term 'performance'. In order to retain a clear focus in this investigation, I draw mainly on examples of sector government PM practices, because these are the most relevant to and representative of PM in the sector as a whole. In the different rural water supply sub-sectors that I encountered in Sub-Saharan Africa, monitoring of access happens via routine reports published by sector offices that occasionally are verified and updated based on scheme inventories. In addition to PM processes that are codified in various ways, such as in reporting formats, standard reporting and inventory procedures, and dedicated budgets, I understand PM as also encompassing less formalised practices that contribute to the body of knowledge on rural water access. In the understanding in this thesis, PM comprises a range of monitoring practices with varying degrees of formality that focus on monitoring results.

1.5 Outline of my argument

The starting point of this thesis is the contrast between Meselich's daily quest for water and official access figures for her location. This contrast between a real-world situation and aggregate figures on 'performance' is the puzzle I intend to investigate in this study. The following 'lay' (as opposed to research) questions informed my research. How can we explain the divergent interpretations of the access to water supply in the fieldwork *kebele*? What do these different interpretations mean for the robustness and credibility of PM processes and their results? Is PM the uniquely-rational, objective process that it is described as being? Do monitoring results inform decisions on rural water access in Ethiopia?

In Chapters 2 to 5 I set the scene and develop my line of investigation.

Chapter 2 introduces the reader to Ethiopia, to the country and sector context chosen to investigate PM of access to rural water supply. I start by outlining the broad political, socio-economic and cultural factors and explain their repercussions for the governance of the water sector. I sketch some broad patterns of water availability and households' daily water needs, the types of technology that support the delivery of rural water services and other factors affecting the rural water access situation in Ethiopia. This is followed by a short overview of the Ethiopian rural water sector and its actors, including sector government and external stakeholders.

Chapter 3 discusses PM and explains what it is commonly perceived to represent: a uniquely objective, rational means to inform robust decisions, through the measurement of progress towards desired results. I explain the major definitions and concepts used by the OECD to describe PM, and the related RBM (Results-Based Management) model. I discuss how PM entered the public sector and development cooperation, and trace the development of target-setting and results monitoring, across the world and in Ethiopia's water sector. At the same time, I critically reflect on the role of PM in the public sector. I trace the historic roots of PM to the industrial revolution when 'scientific methods' were introduced to increase the performance of factory outputs, and I highlight some criticisms of the model, including one of its main promises – to increase accountability for citizens.

In **Chapter 4**, I introduce the theoretical underpinnings of my investigation. The STEPS Centre's understanding of 'social appraisal' allows me to examine different appraisal designs, with particular attention to how power relations affect appraisal exercises. The first aspect I focus on is the role of actors' framings as a more indirect form of power that shapes inputs into knowledge production processes. An important insight for my analysis is that actors' rationales can differ from officially stated appraisal goal. An actor may have an instrumental rationale to

achieve a particular appraisal result and manipulate knowledge production processes accordingly. This manipulation allows the actors to justify decisions that may have been based on other reasons, for instance an external constraint or personal preference. Viewed from this perspective, PM can be seen as managing a performance on stage. A third theoretical insight that informs my study is that monitoring results and the associated decisions may stem from different appraisal processes, of various degrees of formality, and from other ontological aspects. From this it follows that monitoring may be just one among many factors that inform rural water access decisions.

Chapter 5 presents the research methodology. This thesis is based on a qualitative research design. I use a case study approach to study some examples of PM processes and associated decisions in depth. My data comprise document reviews, participant observation and semi-structured interviews. To analyse these data, I use the process tracing method, a research methodology that traces the micro-steps and links that lead to a specific outcome, and may be likened to the work of a detective.

In the three empirical chapters – Chapters 6 to 8 – I pursue the three separate lines of investigation presented above. First, I test whether PM as practised in Ethiopia's rural water sector, reflects the ways in which different people understand and experience rural water 'access'. My main enquiry here relates to whether 'access', as defined and measured by PM, responds to the concerns of water users and implementers. Second, I investigate specific PM processes in depth, to understand the political and power dynamics by which some framings of 'access' are suppressed while others come to the fore. Third, I test the relationship between monitoring results and decisions taken on access to rural water supply.

The focus in **Chapter 6** is on framings of rural water access that concern Ethiopia. I capture framings at different administrative levels – from international to local – and related to different types of actors – government, donors, and NGO representatives – and of women,

men and children who experience rural water access as part of their daily lives. My intention in this chapter is to capture the diversity of different rural water access framings and to establish to what extent official framings used as yardsticks for 'access', represent the diverse notions of access put forward by the different stakeholders.

In **Chapter 7**, I examine the political and power dynamics involved in monitoring access to rural water supply. Specifically, I explore actors' rationales behind monitoring access to rural water supply and how these rationales explain the framings discussed in Chapter 6. Tracing the process of calculating access under the 2008 regional Water Resources Inventory (WRI) in the Southern Region of Ethiopia, I explain how actors exercise power to influence monitoring processes in favour of their rationales. I complement insights from the regional level with monitoring practices at the *woreda* - or district - level in Ethiopia. Here, I highlight the importance of informal monitoring processes for increasing knowledge on rural water access.

In **Chapter 8**, I address the third angle of my investigation, namely the explanatory power of PM results for decisions taken in relation to rural water 'access' in Ethiopia. Of course, decisions related to rural water access includes a wide range of possibilities. Given that the logic of PM within RBM assumes that PM informs sector planning and budgeting, I investigate these two aspects in the first two sections of this chapter. In the third section, I focus on two specific decisions - at *woreda* level, and related to a particular rural water scheme, namely the repair of the borehole in the lowland *kebele* where Meselich queued to fetch water.

Chapter 9 concludes the thesis by drawing together the main findings based on the three lines of investigation informed by my theoretical framework. My research confirms existing claims that global framings of rural water 'access' are indeed not representative of local users' concerns. My findings highlight that by drawing on these dominant framings, PM perpetuates the status quo. At the same time, paradoxically, PM is only one among many factors that influence concrete decisions about access. I find also that PM can be seen as an act of stage

management exploited by different actors - incumbent and subordinate - to uphold their particular rationales.

2 Ethiopia

Chapter outline

This chapter introduces the reader to Ethiopia's wider country and sector context, which provides the background to a discussion of PM of rural water. Section 2.1 discusses the political, socio-economic and cultural factors that have repercussions for water sector governance. Where these aspects differ between regions, I focus on the situation in Ethiopia's Southern Region, where my case study is based. In Section 2.2, I focus on rural water supply, explaining the broad patterns of water availability and water needs in rural Ethiopia, and the types of technology used to access the resource. Section 2.3 provides a brief historic outline of the rural water sector, explaining its organisation and introducing the typical project cycle for delivering infrastructure and the service delivery models of 'CBM' (community-based management) and 'self-supply'. This is followed by a short excursion to explore common criticisms of the dominant CBM model, a short discussion of government roles and responsibilities related to rural water service delivery, including monitoring, and a description of the role of Ethiopia's main development partners in rural water supply. Section 2.4 summarises the contextual issues discussed in the chapter that have a bearing on PM of rural water access in Ethiopia.

Ethiopia is a country of great diversity. Its geography includes very hot and harsh environments, such as the Danakil Desert in the North East of the country, an area below the sea level (Morell, 2005), lush and green environments in the Rift Valley, which cuts across the country from North East to South West, to high mountainous areas in the centre and North West of Ethiopia. The highest peak, Mount Dashen, reaches an altitude of more than 4,600 m above sea level, and temperatures below zero degrees.

Ethiopia has a longstanding religious diversity. According to Ethiopian legend, the *Kebra Negast*, the introduction of Judaism dates back to a visit by the Queen of Sheba to King

Solomon during Old Testament times. Orthodox Christianity has been present in Ethiopia since the 4th century AD (Marcus, 2002: 7), and Islam since the 7th century AD (Last *et al.*, 2012: 22). In 2012, according to official records, 43.5% of Ethiopians are Orthodox Christians, 33.9% are Muslims, 18.6% are Protestants, while Catholicism and traditional beliefs account for just under 4% (PCS, 2008: 17).

Ethiopia's culture is also rich in terms of ethnicity and language. The 2007 Population and Housing Census records more than 80 ethnic groups, 10 of which have populations of over 1 million (PCS, 2008). The greatest ethnic diversity is found in my field location, the Southern Region, which includes 56 ethnic groups (BoFED, 2011). Linked to ethnicity are linguistic threads. There are four different main language groups in Ethiopia and many more individual languages (Pankhurst, 1990). Amharic, a Semitic language spoken by one of the largest ethnic groups, the Amhara, is the administrative language of Ethiopia.

Ethiopia uses a calendar based on the birth of Jesus Christ being approximately seven years and eight months later than the Western calendar; Ethiopian New Year is on 11th September (Last *et al.*, 2012: 67). Dates in Ethiopian documents show these differences. For example, 2010 in the Gregorian calendar is referred to in Ethiopia as 2002/3, depending on the exact month within the year. For consistency, in the text of this thesis, I have converted Ethiopian dates according to the Western Gregorian Calendar, but I reference Ethiopian government documents according to their Ethiopian Calendar dates.

Spatially, and from a European reference point, the area of Ethiopia is approximately the size of France and Spain combined. It is a landlocked country situated in the Horn of Africa (see the map in Figure 2.1). According to population projections based on the 2007 census, in 2010, Ethiopia had a total population of close to 80 million (author's calculation using CSA and PCS, 2008). In 2007, 83.9% of the population lived in a rural area (CSA and PCS, 2008).

2.1 Politics, ethnicity, gender and rural livelihoods in Ethiopia

2.1.1 Recent political history of Ethiopia

Ethiopia has witnessed a succession of different civilisations from ancient to modern times. For many centuries, and until 1974, Ethiopia was a monarchy, organised along feudal relations. The last emperor, Haile Selassie, during his reign, built up a strong hierarchical bureaucracy based on an ethnically defined ruling class, the Amhara (Vaughan and Tronvoll, 2003: 82, Abbink, 2006a: 180, Kapuscinski, 2006). In contrast to other Sub-Saharan African countries, Ethiopia has been subject to colonial rule only briefly – during the short spell of Italian occupation between 1936 and 1941 (Markakis and Ayele, 2006: 40). Haile Selassie was eventually toppled by a popular movement in 1974. In the aftermath of this revolution, the *Derg*, a military junta, established a military dictatorship in the name of “revolutionary socialism” (Markakis and Ayele, 2006: 22). The *Derg* radically changed the social structure of Ethiopia by nationalising land and introducing peasant associations, the predecessor of today’s *kebeles* or sub-districts, as the basic unit to control access to land and other resources, including water (Markakis and Ayele, 2006, Clapham, 2009: 182). In 1991, the *Derg* regime was overthrown by a coalition of ethno-nationalist liberation fronts united under the Ethiopian People’s Revolutionary Democratic Front (EPRDF). The EPRDF was led by the liberation front in one of Ethiopia’s peripheral regions, Tigray.

The EPRDF’s philosophy is based on “‘revolutionary’ democracy” (Vaughan and Tronvoll, 2003: 15), which is linked to the party’s Maoist-inspired and guerrilla background, and follows socialist principles of a centrally organised state (Clapham, 2009: 183). The idea of ‘revolutionary democracy’ emphasises “*communal collective* participation, and representations based on consensus” (Vaughan and Tronvoll, 2003: 117, emphasis in original). In reality, this means that policy directions are decided by the centre within the EPRDF party structure, and ‘cascade down’, sometimes via political campaigns. However, there are also instances of new policy directions starting at the regional level, such as the political campaign

to build basic latrines in the Southern Region, which led to an increase in the official sanitation access figures for the region from 13% in 2003 to 88% in 2006 (Bibby, 2007, Terefe and Welle, 2008).⁷

2.1.2 Political-administrative organisation in Ethiopia

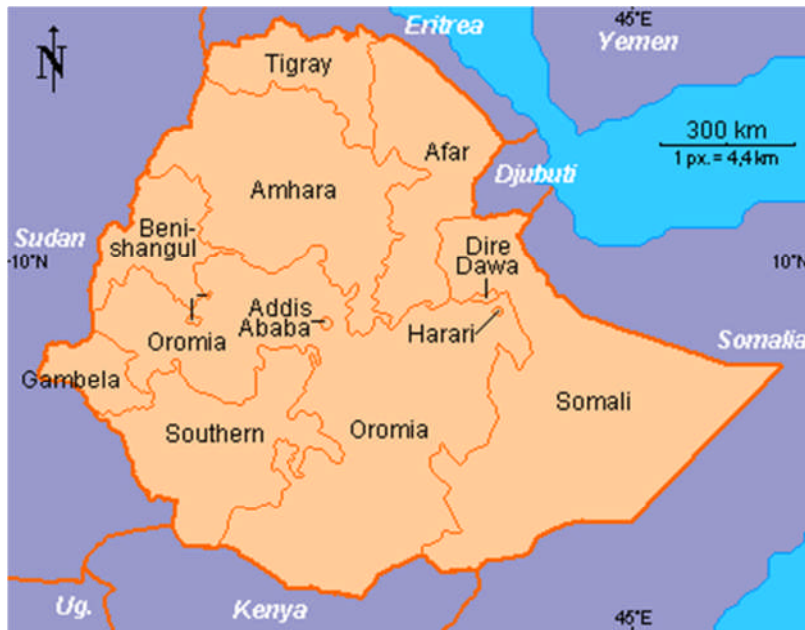
Administratively, Ethiopia has a decentralised governance structure; it is a multi-cultural federation of nine ethnic-based and ethno-linguistic national regional states and two city administrations, Addis Ababa and Dire Dawa (Zewde and Pausewang, 2002: 11, Vaughan and Tronvoll, 2003: 4), see map in Figure 2.1). The increased attention given to different ethnic groups since 1991 is exemplified in the Southern Region, the context for my case study. As its full name – the Southern Nations, Nationalities and Peoples Regional State – indicates, the region is a federation of different ethno-political entities. I discuss ethnicity and its repercussions for the political-administration of the Southern Region in more detail in Section 2.1.4 below.

Because the main criterion for the regional divisions is ethnicity, the regions differ greatly in size, but they differ also in their administrative capacities. The Southern Region is one of four core regions considered to have strong capacity to govern their territories (Gebre-Egziabher and Berhanu, 2007: 20). Ethiopia's decentralised governance structure, in principle, means that the regional national states are semi-autonomous entities. However, in practice, regions still depend heavily on transfers and subsidies from federal government (Gebre-Egziabher, 2007: 1). Because of the strong fiscal influence of the federal level on the regions, their actual autonomy, in particular in relation to making budgetary decisions, is regarded as weak (Abbink, 2006b: 392, Tesfaye, 2000 cited in Gebre-Egziabher and Berhanu, 2007: 21). In this thesis, the

⁷ However, the official figures were strongly contested in Ethiopian sector forums I attended. A key issue related to the official portrayal of access is the definition of what constitutes an 'improved' basic latrine – a 'hole in the ground' or fulfilling criteria such as inclusion of a superstructure and door, evidence of use and cleanliness, and an operational handwashing facility (ref MoH sanitation protocol).

question of decision-making autonomy surfaces with regard to the interpretation of a regional water resources inventory, a point I discuss in Chapter 7.

Figure 2.1 Map showing regional boundaries in Ethiopia



Source: International Development Partnerships (2012)

There are five layers of government in Ethiopia: federal, regional, zonal, *woreda* (district) and *kebele* (sub-district). In the Southern Region, all these layers, including the zones, are democratically constituted (Gebre-Egziabher and Berhanu, 2007: 15). Executive power at each administrative level rests with the head of administration and the council, which includes the heads of sector offices as well as elected representatives (Arsano *et al.*, 2010: 6). The heads of sector offices are political appointments made by the head of administration, which results in close links between the EPRDF party at all levels in the Ethiopian administration.

The decentralised structure of the Ethiopian state means that regional level sector offices, referred to as 'Bureau' in Ethiopia, are executive bodies responsible for the implementation of federal policies, strategies and action plans (Gebre-Egziabher and Berhanu, 2007: 14). Since a second wave of decentralisation in the early 2000s, *woredas*, the local governments in Ethiopia,

gained higher standing and greater capacity, mainly through the instrument of the *woreda* block grants and an increased number of personnel, which enables the *woreda* to execute planning and budgeting (Assefa and Gebre-Egziabher, 2007). Annual and strategic five-year planning is based on a bottom-up planning process originating in the lowest administrative tier of government, the *kebele* level, but with no direct participation of citizens (Gebre-Egziabher and Berhanu, 2007: 15-16). I explain the roles and responsibilities of the water sector government agencies at these different administrative levels in more detail in Section 2.3.3.

Of importance in the context of this thesis is that, in 2004, the Ethiopian government embarked on a Business Process Reengineering (BPR) process intended to strengthen results-based performance management in the Ethiopian Civil Service (Debela, 2009, Debela and Hagos, 2011).⁸ This reform process is an indication of the increasing importance of PM in the Ethiopian context. During my fieldwork, water sector staff were being trained, and sector agencies were being restructured into business processes, but the reform had yet to have direct repercussions on existing monitoring processes in the sector. I therefore do not refer to it directly in the empirical chapters.

2.1.3 Political culture in Ethiopia

Despite the decentralised structure of the Ethiopian government, many analysts characterise the country as hierarchical and authoritarian (Abbink, 2006b, Aalen and Tronvoll, 2009, Clapham, 2009: 181). This is related to the strong position in the country of the ruling EPRDF party⁹ and its predominance in the political party landscape, the ruling party's strong ties with the bureaucracy (ICG, 2009: 17), and the relative absence of other loci of power outside the EPRDF party system (Clapham, 2009). Below, I discuss each of these points in turn.

⁸ In informal conversations with sector staff members I learned that the BPR was used by the government to further increase linkages between the bureaucracy and the ruling part, by way of augmenting the number of politically appointed positions in the civil service, a point I discuss in section 2.1.3. This is an indication that the Ethiopian government took the BPR process serious at the time of my fieldwork. However, at the time of field work, it was not possible to evaluate whether the restructuring of the civil service into business processes had direct repercussions for sector monitoring.

⁹ In some of Ethiopia's regions, the EPRDF is represented by its ethnic affiliates - in the Southern Region, the South Ethiopian People's Democratic Movement.

In Ethiopia, political party politics is dominated by the ruling party, the EPRDF, which came to power in 1991 as a coalition of parties representing different parts of Ethiopia (Abbink, 2006b: 398). In practice, Ethiopia can be characterised as a one-party democracy. Ethiopian opposition parties are said to be fragmented and not capable of providing a serious alternative to the EPRDF, particularly after the violent clampdown on protestors and opposition parties in the aftermath of the 2005 general elections, during which more than 200 people died and over 10,000 were arrested, including the leadership and many members of one of the opposition parties (Aalen and Tronvoll, 2009: 196-7). Since the last general elections in 2010, the ruling party holds 499 out of 547 of seats in the House of Representatives (NEBE, 2010).¹⁰

An important link between the ruling party and state bureaucracy is the political appointment of people who are loyal to the EPRDF (Abbink, 2006a: 177). Many senior positions in the civil service, including the heads of sector offices, are political appointees. Heads of sector offices make up the members of the cabinet, where decisions over budget allocations are taken. As a result, party members have a strong influence over important development related decisions at *woreda* level. In practice, therefore, important issues may be discussed in party meetings that precede government meetings, thereby foreclosing decisions (Markakis and Ayele, 2006: 52). The pressure exercised by the ruling party on sector office employees to adhere to the party line was apparent in my fieldwork location, where, at *woreda* level, government employees were strongly encouraged to join the EPRDF, and career advancement depended partly on party membership (Interview #179). The EPRDF and its affiliated parties also have a strong presence at grassroots level, in the *kebele* and sub-*kebele* structures, which provide them with information on and allow influence over day-to-day activities related to rural life, including water supply access (Aalen and Tronvoll, 2009: 198). In my case study *woreda*, heads

¹⁰ In August 2012, Meles Zenawi, Ethiopia's then Prime Minister, died suddenly. Despite speculation in Western media that the Prime Minister's death would lead to instability in the country (Guardian, 2012, The Telegraph, 2012), the succession process has been smooth and the country has remained stable.

of sector offices who were also party members, regularly visited *kebeles* to hold political campaign meetings and to discuss development activities in those locations.

In addition, the freedom of action and political voice of Civil Society Organisations (CSOs) in Ethiopia is limited. Indigenous CSOs in Ethiopia are mainly traditional associations such as *idir* (self-help organisations), *equb* (credit associations), and ethnic-based development associations and a few rights-based advocacy organisations (Zewde and Pausewang, 2002: 12). Since the 1970s, NGOs of external origin or that receive substantial external funding, have mushroomed in Ethiopia. NGOs mainly engage in welfare and service delivery programmes, rather than promoting empowerment (Berhanu, 2002: 126). The Charities and Societies Proclamation, introduced in 2009, *inter alia* prohibits any charity with more than 10% foreign income from working on issues related to human rights, justice, promotion of equality, gender and conflict resolution (FDRE, 2009). This new legislation contributed further to the apolitical character of these organisations. In the water sector, the 2010 annual joint CSO report on Water Supply, Sanitation and Hygiene notes that “the law does not seem to have significantly altered the way WASH CSOs operate in Ethiopia” (CCRDA, 2010: 13). This may be because WASH NGOs primarily focus on delivering services rather than on actively promoting rights. At the same time, informal conversations with NGO representatives indicate that NGOs self-sanction activities that may be seen as provocative by the Ethiopian Government.

While, overall, the political climate in Ethiopia does not encourage open and free debate, the extent to which the political space for discussion is closed depends on the subject matter. On the topic of rural water supply, the government has welcomed NGOs in their role to support government’s monitoring efforts in its effort to roll out a National WASH Inventory, and has encouraged their participation in sector forums and discussions convened on the topic. My research findings show also that there is an active internal debate on monitoring processes and results among sector government stakeholders.

2.1.4 Ethnicity and gender

There are, as mentioned above, over 80 ethnic groups in Ethiopia. Of those, 56 ethnic and national groups with their own languages, cultures, and social identities live in the Southern Region (BoFED, 2008). Based on the principle of ethnic-federalism, the Ethiopian administrative boundaries are divided along ethnic lines. This applies to regional boundaries and also zones and *woredas*. In the Southern Region, in particular, ethnic identities have been reinforced through the creation of ethnic-based zones and special *woredas* that report directly to the region. In these administrative areas, ethnic groups self-govern through representation by members of their communities in the administration and political institutions. They also are allowed use their own languages in primary education and for official purposes (Abbink, 2006b: 395).

While ethnic-based federalism has been recognised as an important achievement in increasing the visibility of minority groups in Ethiopia, some report that there are also signs that division along ethnic lines has constructed ethnicity as a fault-line in conflicts over resources. Conflicts arise mainly over government funding, and over land, which includes disputes over access to water resources (Abbink, 2006b: 395-6). In my fieldwork locations, there were local disputes over irrigation water (Interview #37, #179), but I could not discern that a particular issue was related to ethnicity. At the regional level, however, the distribution of financial resources across different ethnic groups is a sensitive issue in the Southern Region (Interview #89) and, as such, is an important factor impacting on rural water supply in the form, for instance, of capital budget allocations for infrastructure across the region, a point I discuss in Chapter 9.

There is also limited documentation of specific water management practices by one ethnic group in the Southern Region. The Borena, who are pastoralists across the border between Oromiya and Southern Region, have customary rules for managing and maintaining hand-dug ponds and wells that are an integral part of the social organisation of their society. These rules apply to domestic uses, and define rota for watering animals, the main livelihood asset of the

Borena people (Chemedo *et al.*, 2007). In my case study field work locations, I did not hear about water management practices other than those introduced by the government.

Gender analyses in Ethiopia suggest that in affairs of the state and in religion, i.e. Orthodox Christianity and Islam, more power is given to men than to women (Pankhurst, 1992, WB, 2010a). Gebre-Igzahiber and colleagues (2007, cited in WB, 2010a: 84) suggest that despite the presence of women's affairs agencies at all administrative levels, they have not contributed to a structural change in gender relations biased against women. An Ethiopian case study on gender and governance in rural services (WB, 2010a: 86) observes a "ghettoisation of women in women affairs units" while they remain underrepresented in other bureaucratic and political positions. In matters of community development, the study found a virtual absence of women's voices in planning and decision making (WB, 2010a: 87). I elaborate on the aspect of gender in section 2.3.2 when I discuss community management of water supply.

2.1.5 Socio-economic development and livelihood patterns

In a world comparison, Ethiopia's level of human development is low. The country was ranked 174 out of 187 countries on the Human Development Index in 2011 (UNDP). At the same time, Ethiopia has experienced sustained, at times double-digit, economic growth since 2003 (Mwanakatwe, 2010). According to the World Development Indicators, levels of poverty have decreased from 45% of the population living under the poverty line in 1995, to 38.9% in 2005 (WB, 2012b). Primary school enrolment, in particular, has grown substantially in recent years, reaching over 100% in 2010 (WB, 2012b).

The rural population of Ethiopia has experienced the positive changes in socio-economic development in the form of greater access to extension services. In Ethiopia, the two main extension services are health and agriculture. In the Southern Region, the agricultural extension worker to household ratio was 1:238 in 2010 (BoFED, 2011). While regional statistics do not provide this ratio, the fact that 94% of *kebeles* had a health post in 2010 indicates a

good presence of health extension services in the region (BoFED, 2011).¹¹ Both types of extension service have some relation with domestic water supply. Agricultural extension services include support for traditional irrigation practices, which include the digging of unlined shallow wells that can be used for vegetable gardens and other domestic purposes.¹² Health extension workers encourage behaviour change in 16 basic health related topics, 6 of which fall under the heading of domestic sanitation and hygiene including the safe handling of water. Another duty of health staff is to check environmental sanitation conditions at communal water schemes (MoH, 2006).

Predominant livelihoods in rural areas are subsistence farming and pastoralism.¹³ In the Southern Region, this applies to 90% of the region's population (BoFED, 2011: 138). Livelihood activities are very diverse in the South, with coffee cultivation predominant in the Western highlands and livestock breeding dominating in the lowlands (BoFED, 2011: 138).¹⁴ Despite this diversity, most households practise rainfed agriculture in combination with some livestock holdings (BoFED, 2011: 139). There is wide variation in rainfall patterns and other factors such as the small and fragmented nature of land holdings, and limited access to agricultural inputs and population growth, which contribute to household vulnerability and food insecurity, as Alemayehu Konde and colleagues (2001) report on households in Wolayta Zone in the Southern Region. In 2010, the regional Agricultural and Rural Development Bureau (2010) estimated 10% of the region's population was chronically food insecure. The Productive Safety-Net Programme (PSNP), a multi-sector programme intended to reduce chronic food insecurity and to increase access to markets and services, including rural water supply (MoARD,

¹¹ The good outreach of extension services was confirmed in my fieldwork locations where the three agricultural and two health extension positions were filled.

¹² In the early 2000s, the Ministry of Agriculture implemented a national campaign to dig such wells. In my case study *woreda*, however, many of the wells dug during that period have collapsed due to flooding and soil erosion (Interview #179).

¹³ Pasture constitutes 63% of Ethiopia's agricultural land area while 12-15 million of the then 77 million Ethiopians were estimated to follow a pastoralist lifestyle in 2006 (Pantuliano and Wekesa, 2008).

¹⁴ Another indication of the region's diversity is the stark difference in population density ranging from 665 persons per km² in Gedeo Zone to 7 persons per km² in South Omo Zone (BoFED, 2011: 46).

2010), operates in 78 of the 134 regional *woredas* (MoARD, 2010). The PSNP also has a component related to the construction of low-cost rural water supply infrastructure and operates in my case study *woreda*. I therefore refer to the PSNP in several places in the thesis.

People's socio-economic statuses and livelihoods are important contextual factors affecting their demand for rural water supply in Ethiopia. For example, their economic status may not allow them to pay for water, or their lack of education may be responsible for a lack of awareness about the hygiene benefits of clean water.¹⁵ In the next section I explore in more detail patterns of water availability and rural peoples' need for water based on their livelihoods; I look at the relationship between the two and juxtapose it with a discussion of the types of technologies supporting rural water access in Ethiopia.

2.2 Water availability, needs, access and infrastructure

2.2.1 Patterns of water availability

Ethiopia's geographic diversity, discussed at the beginning of this chapter, is mirrored in the patterns of water availability. The country has eight major river basins, one lake basin, and three dry basins. The river basins originate in Ethiopia's central highlands, which experience high rainfall levels of up to 3,000 mm per year, and flow out to the lowlands where annual precipitation can be as low as 200 mm per year (MoWE, 2012b). The variability in rainfall patterns within and across years in Ethiopia is among the highest in the world¹⁶ and an important contributor to household vulnerability discussed in section 2.1.5 above (MoARD, 2010). Recent climatic trend assessments for Ethiopia, project increased rainfall, and more changes to rainfall patterns across the country, including more extreme weather events (McSweeney *et al.*, n.d.).

¹⁵ E.g., a recent study by Degnet Abebaw and colleagues (2011) on water access in rural Ethiopia found that there is a significant correlation between the household's economic status and educational background, and drawing water from an improved source.

¹⁶ Rainfall data for the period 1967-2000 indicate that annual variability in rainfall across different zones in Ethiopia ranged from a low of 15% to a high of 81% (MoARD, 2010: 3).

In rural Ethiopia, the main source for domestic water supply is groundwater as opposed to surface water from rivers or lakes. The availability of groundwater depends heavily on rainfall and aquifer replenishment (Calow *et al.*, 2002). Figure 2.2 provides a groundwater availability map for Ethiopia and a spatial overview of water availability during drought times based on these two inputs. Ethiopia's agro-ecological zones serve as a good orientation for patterns of groundwater availability. The three major agro-ecological zones in Ethiopia are: the highlands which are above 2,300m, the 'midland' areas ranging from 1,500 to 2,300m, and the lowlands¹⁷, below 1,500m (Hurni, 1998: 4).¹⁸

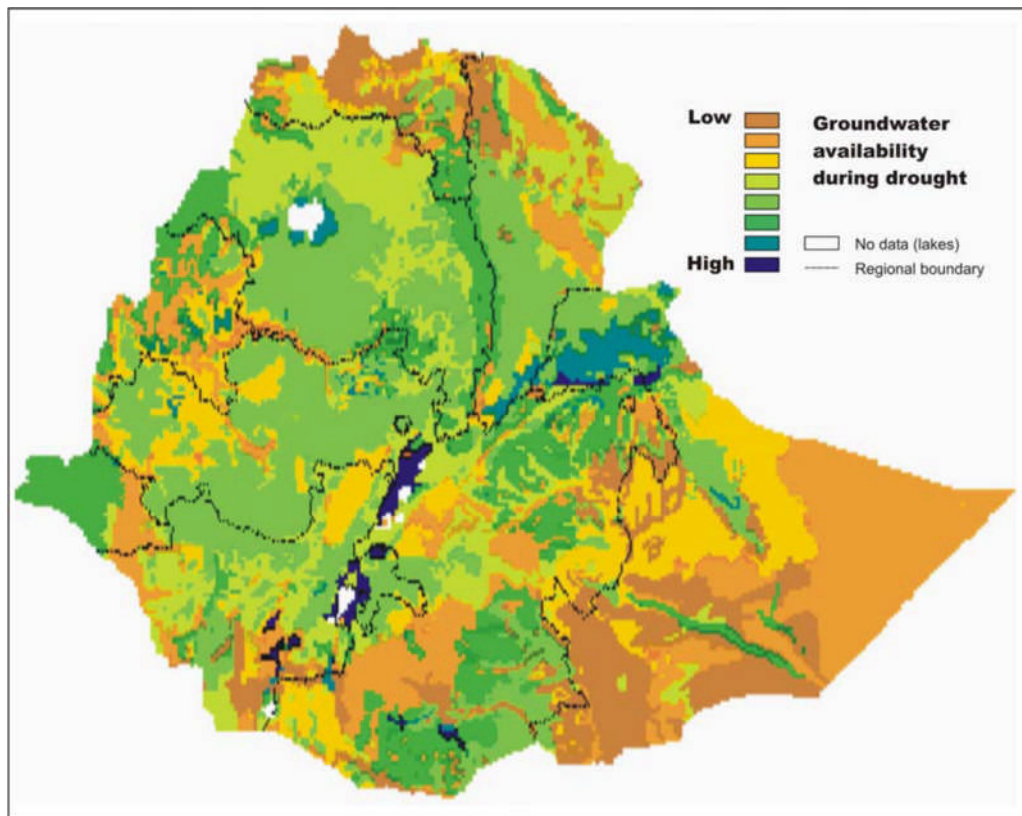
The highland and midland areas are situated in the centre of Ethiopia; they cover approximately 35% of the Ethiopian territory and are densely populated (Hurni, 1998: 21). According to Calow, MacDonald *et al* (2002), in the highlands, there is very good availability of groundwater which is easily accessible at many points via low cost technologies such as protected springs and hand-dug wells. This classification matches water availability in the highland *kebele* of my case study *woreda*, where small springs and shallow private dug wells are common. I describe water availability in this location in more detail in Chapter 6 where I discuss different framings of access to rural water supply.

In the midland areas, at altitudes of 1,500-2,300m, the groundwater resource base tends to be moderate, while the higher population density in these areas imposes higher levels of demand on a single source. Groundwater is extracted via a wide range of technologies, mainly protected springs, hand-dug wells, and machine-drilled wells in the Southern Region. Depending on rainfall patterns, groundwater availability in these areas can vary greatly within and between years. When droughts occur, the shallower springs and manually dug wells dry up first, putting more pressure on deep boreholes (Calow *et al.*, 2002).

¹⁷ In Ethiopia, these three agro-ecological zones are called *dega* (highlands), *weyna dega* (midland) and *kola* (lowlands).

¹⁸ Hurni (1998) distinguishes two additional agro-ecological zones in Ethiopia: high mountain areas above 3,200m and drylands below 500m.

Figure 2.2 Groundwater availability during drought in Ethiopia



Source: MacDonald, Calow *et al.* (2001)

In the lowland areas (1,500-500 m) that cover approximately one sixth of Ethiopia's territory, rainfall is more variable and droughts are frequent (Hurni, 1998: 2-3, 21), but population densities remain relatively high. Groundwater is extracted mainly via deep boreholes. During times of high demand, individual groundwater sources in these areas can become stressed because there is less recharge from rainfall (Calow *et al.*, 2002). The second *kebele* in my case study *woreda*, a lowland area, exhibits these features, which I also describe in more detail in Chapter 6.

The remaining 50% of Ethiopia's territory is below 500 m. These are dryland areas, mainly in the East and South of the country. Population densities are low, but because of the predominant pastoralist lifestyle, demand for water supply is often high since groundwater

sources are required to cater also for livestock. The drylands are not included in my fieldwork locations.

An important influence on drinking water quality from groundwater in Ethiopia is the high level of fluoride concentrations in many locations along the Rift Valley, which can pose serious health risks (Haimanot, 1990). In Ethiopia, approximately 10 million people potentially are affected (Kloos and Tekle Haimanot, 1999, RiPPLE, 2008, Tadesse *et al.*, 2010). Although my fieldwork locations are situated in the Rift Valley, water quality tests did not expose elevated fluoride levels in these areas; I therefore do not discuss this issue in detail in this thesis.

Another contaminant of drinking water in Ethiopia is thermotolerant coliforms. A rapid assessment of drinking water quality carried out between 2004 and 2005 showed that 73% of all drinking water sources complied with WHO drinking water quality guidelines and Ethiopian drinking water standards. The study did not find other significant sources of pollution of drinking water in Ethiopia (Tadesse *et al.*, 2010).

2.2.2 Patterns of household water needs

The factors affecting household water needs are related to a combination of livelihood styles and settlement patterns (Calow *et al.*, 2010), and the availability of protected and unprotected water sources to cover households' overall water needs. In addition, perceptions of water quality, and issues related to governance of schemes, such as opening hours, agreements on maximum volumes collected per household, queuing times, financial contributions and scheme functionality, have an effect on individual household strategies to obtain daily water needs.

People require water for a variety of domestic and productive purposes. In addition to drinking, cooking and washing, households use water for livestock, small irrigation, vegetable gardening and other small scale productive purposes such as beer brewing or brick making (Moriarty *et al.*, 2004). The fact that people need water for purposes spanning the domestic and productive

realms is recognised by the term ‘Multiple Use water Services’ (MUS).¹⁹ A number of studies on Ethiopia, from different angles, analyse the relation between peoples’ livelihoods and their water needs. These include a study on equitable water services for multiple uses (Abebe *et al.*, 2010) and work on the costs and benefits of MUS systems (Adank *et al.*, 2008); research to better understand the relationship between water and food security including a study on the water economy in relation with livelihood systems in different agro-ecological zones (Coulter *et al.*, 2010), and case studies on the links between water supply, sanitation and food security (Tolossa and Tadesse, 2008); and research on the contribution of non-communal and unprotected wells to cover households’ diverse water needs (Sutton *et al.*, 2011).

This body of work highlights the great diversity of household water needs, which vary depending on agro-ecological zones, livelihoods, seasonality and wealth. For instance, in the highland and midland areas, where people practise a combination of livestock holding and rainfed agriculture, a combination of protected and unprotected springs and shallow wells are the main water sources for domestic use, livestock watering and small scale irrigation. During the rainy season, people employ a number of strategies, including rainwater harvesting from the roofs, collecting in pots and pans, and drawing water from unprotected wells and streams, while in the dry season, reliance on a few perennial springs is high, which greatly increases time needed for water collection. Wealthier households are able to mobilise more resources than poor households to collect water, for example using donkey carts or paying for labour. Wealthier households also have higher water needs based on the number of livestock and available land holdings. In the lowland/dryland areas with predominantly pastoralist lifestyles, overall water needs are much higher given that all wealth groups have large herds. In these areas, water is accessed mainly via shallow and deep wells. During the dry season and droughts in the drylands, the longer distances to water sources results in adaptive strategies

¹⁹ Much of the work in this area is conducted by a collaborative partnership called the MUS Group which includes different national and international organisations interested in the topic (MUS, 2012).

that distinguish wealth groups. For instance, wealthier households increase their water consumption while poorer households adapt by reducing the amounts of water they collect.

I discuss local patterns of water demand in my fieldwork locations, in Chapter 6, where I analyse peoples' experience of access to rural water in a highland a lowland *kebele* in my case study *woreda*. The objective in this section was to highlight the diversity of the water needs of rural Ethiopians and their strategies to satisfy them. In the next section, I discuss which aspects are included in the term 'water access' in the context of Ethiopia and the main technologies used for domestic rural water supply in Ethiopia's Southern Region.

2.2.3 Rural water access and types of technology

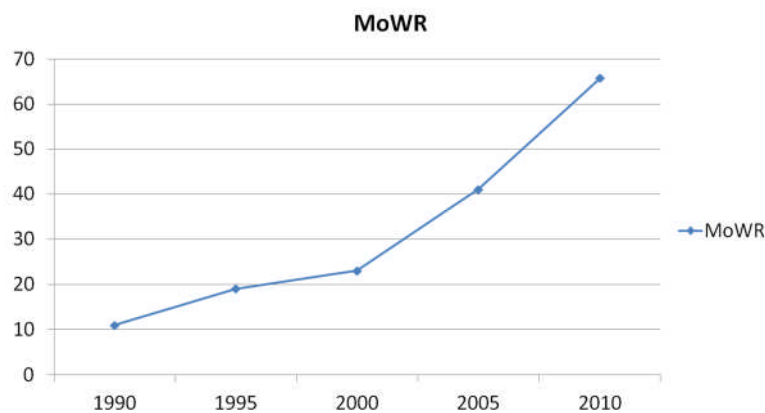
In Ethiopia, the definition of rural water access is two-tiered. The minimum service standard for rural water supply is a volume of "15 liter per person per day (l/c/day) safe water supply from a water point within a maximum conceptual radius of 1.5 km from the residence of the beneficiary to the water point" (MoWR, 2009a). Hence, basic rural water supply in Ethiopia refers to domestic purposes - drinking and cooking, washing and basic hygiene. Ethiopia's minimum standards are below international WHO guidelines (Howard and Bartram, 2003) for domestic water, which suggest a minimum of 20 litres per capita per day from a distance of 1km, which I discuss in detail in Chapter 6.

In practice, infrastructure is the focus for delivering and assessing access to rural water supply services in Ethiopia. The MoWR's (Ministry of Water Resources) official access figures to rural water supply are based on the estimates of how many people can be served by an 'improved' scheme, which corresponds to a list of technical facilities, classified by the JMP, that qualify as an "improved drinking water source" (WHO and UNICEF, 2010).

Based on this calculation, access to rural water supply in Ethiopia has increased steadily from only 11% access in 1990 to 65.8% in 2010. Figure 2.3, based on yearly information taken from internal and published sector documents, illustrates this rapid increase, particularly since 2000.

The narrow lens of domestic infrastructure through which the MoWR (and agencies internationally) assess water access, is radically different from the patterns of water availability and household water needs I discussed above. I return to the official rural water access figures several times throughout the thesis and unpack their underlying politics. In the reminder of this section, I explain the different types of technology for rural water supply, in particular those types prevalent in the Southern Region that are relevant for my case studies.

Figure 2.3 MoWR records of access to rural water in Ethiopia from 1990 to 2010



Sources: various sector reports (Rahmato, 1999, MoWR, 2002, MoWR et al., 2006b, MoFED, 2010, MoWE, 2010)

There is a total of 17 different types of water supply schemes catering for rural areas in Ethiopia (MoWR, 2005: 40). The four most common types in 2005 in the Southern Region were hand-dug wells, shallow wells, deep wells, and protected springs. Table 2.1 presents selected characteristics for these different schemes, which are described in detail below in relation to their individual infrastructures.

Table 2.1 Characteristics of the four most common rural water technologies in the Southern Region

Type of scheme	Average depth	Estimated number of beneficiaries	Description
Hand dug well fitted with hand pump	15 m	270	Water well dug by human labour and hand tools and fitted with hand pump
Protected spring	Not applicable	338	Natural springs protected from contamination by constructing structures at their sources. Some have distribution points at the source while others are fitted with pipelines and may have one or more water distribution points.
Shallow well	60 m	457	Water well drilled by machine and fitted with hand pump
Deep well	200 m	3,313	Water well drilled by machine, fitted with motorised pump and a distribution pipeline.

Sources: (MoWR, 2005, Amberbir, 2007)

Approximately a fifth of all rural water schemes in the Southern Region in 2005 were hand-dug wells (HDWs). Hand-dug wells, as their name implies, are dug manually, to an average depth of 15m and are a relatively low cost technology. In many areas of Ethiopia, individuals dig wells on their own initiative or with the support of agricultural extension workers (see above). However, to qualify as an 'improved source', in line with WHO water quality standards, a well needs fitting of a hand pump. One of these types of wells, supplied for communal purposes, is estimated to support 270 people in Ethiopia, a calculation based on the lifting capacity of the pump. In addition, the MoWR supports the construction of so-called 'self-supply' wells to serve small groups of households (discussed further in Section 2.3)

Another low-cost technology is protected springs, which, according to the MoWR, cater for an estimated average of 338 persons. In the Southern Region, protected springs constituted 42% of all schemes in 2005. They can be point sources or, if yield and settlement patterns permit, they can serve several gravity-fed water points. Protected springs can serve any number from a few households to several villages. Schemes with more than two distribution points can become very costly and fall under a different scheme category that is not captured in Table 2.1.

For machine-drilled wells, which can be shallow or deep wells, construction costs increase substantially. Shallow wells (SWs), which reach groundwater levels of up to 60m in Ethiopia, are fitted with manual hand pumps and to the non-expert appear the same as HDWs. Their capacity in Ethiopia is estimated at 457 people.²⁰

Deep wells (DWs) are common where groundwater levels are below 60m; motorised pumps are required to bring the water to the surface, which substantially increases their construction costs. It also increases the effort and skills required to operate and maintain them, and the related costs in relation to fuel and higher repair costs. Water is pumped to an elevated reservoir from where it is distributed to one or more water collection points.

As discussed in Section 2.2 above, not all technologies are viable in all agro-ecological zones of Ethiopia. Protected springs are most common in the highland areas, a mixture of technologies is used in the midland areas, and deep wells are typical of the lowland and dryland areas. Each type of technology has advantages and disadvantages. While protected springs and HDW require less finance for their construction and are easier to maintain, they are more subject to seasonal changes, to drying up when the water table depletes, and to contamination. Deep wells require substantial financial inputs and are more complicated and costly to operate, but are more likely to continue to provide water during dry seasons and drought spells.

A major concern with all the technologies, which I referred to in Chapter 1, is their high rate of non-functionality. Across sub-Saharan Africa, experts report persistently high rates of non-functionality and repeated break downs of existing schemes (Harvey and Reed, 2007, Harvey, 2008, Lockwood and Smits, 2011). A recent Rural Water Supply Network (RWSN) review of hand pump functionality rates in 20 Sub-Saharan African countries found 36% on average of non-functional hand pumps across these countries (RWSN, 2009). In Ethiopia, in 2010, the MoWE (2010: 11) estimated that 30% of all rural water schemes in Ethiopia were in disrepair

²⁰ I assume that the higher estimate is based on a different type of pump and on the well reaching different aquifers from HDWs.

at some point during the year. Independent studies find higher non-functionality rates in the country, ranging from 30%-40% in a World Bank study of 20 *woredas* (WB, 2009: 65), and 62% in another case study of one *woreda* (Abebe and Deneke, 2008: 19). I discuss some underlying reasons for these malfunctions related to the currently dominant service delivery model of CBM (Community-based Management).

2.3 The Ethiopian rural water supply sub-sector

In this section, I present and discuss Ethiopian rural water sector. After a brief historical overview of the sector's institutional and policy framework I introduce and discuss the service delivery model for rural water supply in Ethiopia, with particular emphasis on the predominant CBM model. I explain the roles and responsibilities of sector offices in supporting this model, and introduce the major development partners in the rural water sector, bilateral and multilateral donor programmes and NGOs.

2.3.1 Historical overview

In the early 1990s, there were only some 6,000 water supply schemes in rural Ethiopia, serving just 11% of the total rural population (Rahmato, 1999). Sector government structures to support rural water supply were in their infancy at that time. Water-related interventions were coordinated by the Water Resources Commission, based in the capital Addis Ababa, from where it was logistically difficult to reach out to rural communities (Interview #89). The institutional set up of the sector improved when the dedicated ministry MoWR was established in 1995 (Tadesse, 2008). In October 2010, the MoWR merged with the energy sector to become the Ministry of Water and Energy. Since this merger occurred in the period after my fieldwork, I refer in this thesis to the MoWR.

The establishment of a separate ministry in 1995 enabled the development of strategic directions for the sector. The 1999 National Water Resources Management Policy (MoWR,

1999) set out basic principles and objectives for the provision of water supply, which were further detailed in the 2001 water sector strategy (MoWR, 2001). The 2002 Water Sector Development Programme (MoWR, 2002) and the 2003 Master Plan, set specific targets and plans for the water supply sub-sector. Shortly after, in 2005, these were overruled by the Universal Access Programme (UAP) (MoWR, 2005), which guided sector activities during my fieldwork period in 2009-10.

The original – very ambitious - UAP goal was to achieve 98% access to rural water supply by 2012, far exceeding the internationally set MDGs, which is something I discuss in detail in Chapter 6. The UAP strategy was revised twice. The first review in 2009 resulted in a change of strategy to accelerate the pace of implementation and in an increased emphasis on “cost-effective water supply schemes which can be implemented at household and community level through community mass mobilisation” (MoWR, 2009a: 11).

The suggested technology mix in the revised UAP document envisaged 82% of all schemes being low-cost, namely protected springs and hand-dug wells. The second review, at the end of 2010, led to a change in the timeline for achieving universal access to rural water in Ethiopia, from 2012 to 2015. As my fieldwork period occurred before the second UAP revision, my point of reference in this thesis research is the 2009 revision. In the next section, I explain the service delivery approach to rural water supply in the sector policy and strategy in more detail.

2.3.2 Service delivery models for rural water supply in Ethiopia

As in many other low income countries, the rural water supply infrastructure in Ethiopia is predominantly provided via a ‘project cycle’ that ends when the infrastructure is constructed and the scheme is handed over to the user community. The Ethiopian Water Resources Management Policy aims at communities taking ownership of and being responsible for the operation and maintenance (O&M) of rural water supply schemes and envisages, at minimum, cost-recovery of O&M activities (MoWR, 1999). This policy direction refers to CBM as a service

delivery model for rural water supply. As already discussed in the Introduction, the underlying principle of this model is for decisions regarding rural water supply being taken at the lowest appropriate level. This is operationalised through the participation of prospective users in planning and implementation during the project cycle, including expression of 'demand' through cash or in-kind contributions to capital costs, and, after completion, taking responsibility for the O&M of the water supply schemes via WASH²¹ committees (Harvey & Reed 2007: 366). CBM is generally assumed to enhance empowerment and inclusiveness and increase the community's sense of ownership and, thus, the scheme's sustainability (Dongier *et al.*, 2002). However, the consistently high non-functionality rates in rural water schemes across sub-Saharan Africa discussed above and expert literature indicate inherent flaws in and limitations of CBM.

The community management model has been criticised for its inaccurate assumption of community cohesion (Agrawal and Gibson, 1999, Mehta, 2006), and for conflating community participation during project implementation with community management of the infrastructure after project completion (Harvey and Reed, 2007). Some highlight that the normative intention of increasing empowerment and citizenship underlying participation in reality can become "participation as ... payment" (Jones, 2011: 54) and that participation may be enforced rather than voluntary (Cleaver and Toner, 2006: 216). In Ethiopia, these functional notions of participation are exemplified in the frequent comment that "the community has *been participated*" (Interview #161).

Similar patterns apply to the role of gender in water supply. According to Tina Wallace and Anne Coles (2005) the water sector has long recognised the central role of women in providing for and managing domestic water supply, but has fostered female participation in projects

²¹ In line with trends to integrate water supply, sanitation and hygiene, described above, and related to recent reform processes in Ethiopia, these committees are commonly referred to as WASH committees. In my thesis, I adopt this terminology for consistency, although I do not discuss sanitation and hygiene aspects here.

predominantly for reasons of efficiency – “to make projects work” (Joshi, 2011: 63). Wallace and Coles (2005: 9) caution that, in the water sector, attention to gender often is conflated with women’s participation, which ignores the wider gender concepts of power and inequality. This is confirmed by reports of “tokenistic” (Harvey and Reed, 2004: 88) representation of women on WASH committees, to satisfy a donor requirement rather than as a local initiative. This observation is particularly relevant in Ethiopia, where studies show that women face social and cultural barriers to attending community meetings and, when they do attend, struggle to express their concerns (WB, 2010a); this is related to the broader context of gender relations in Ethiopia, discussed in Section 2.1.4. The absence of women’s voices on WASH committee and in other community meetings is investigated in this thesis research and discussed specifically in Chapter 6.

Furthermore, the imperative of cost recovery to sustain scheme functionality can lead to exclusion of more vulnerable and marginalised people (Cleaver and Toner, 2006). At the same time, cost recovery is often not achieved because of insufficient capacity to collect O&M funds and the professionalisation of scheme management under the CBM model (Fonseca and Njiru, 2003). Altogether, these criticisms point to a “cosmetic and tokenist” (Manor, 2004: 202) character of community management that depoliticises the notion of citizenship (Hickey, 2010) and fails to address the challenges related to the wider economic, institutional and political structures in which this model is embedded.

The lack of attention to the wider context and to the local conditions is demonstrated in analyses of the reasons for high non-functionality of rural water schemes. Peter Harvey and Bob Reed (2004: xix) argue that many issues pertinent to hand pump failures in Africa are related to the focus on infrastructure provision through a project delivery cycle “that [suffer] from the engineering mindset of ‘design and build’”. The mindset of a project-based approach to water service provision has important implications for monitoring practices, which consider

the completed hardware as the main development output rather than considering rural water supply as an ongoing activity. The focus on the project cycle was still an issue in 2011, as indicated by a study on the sustainability of rural water supply in Sub-Saharan Africa (Lockwood and Smits, 2011). This study and the one by Harvey and Reed argue that the thinking related to rural water supply needs to move from infrastructure provision to the concept of rural water supply services that require ongoing support from and regulation by government, including monitoring.

An important challenge regarding the implementation of CBM across Sub-Saharan Africa is its weak formalisation at country level and below, exemplified in the lack of legal status of committees, lack of professional capacity to support CBM and lack of supporting legislation and policy (Lockwood and Smits, 2011: 4). These issues apply especially to Ethiopia. Lemma (2006), for example, finds that the ownership of assets is unclear, and, in several regions, water committees responsible for operating and maintaining schemes had no legal standing. The study found also that concrete guidance on CBM principles in Ethiopia was weak in practice, partly because general policy directions contained in the policy and strategy had not been translated into specific rules, regulations and guidelines at the federal level and below.

In addition to CBM, the Ethiopian government also promotes 'self-supply' as a service delivery model in rural areas (see Section 2.2). 'Self-supply' refers to users improving their own water supplies, usually through investments at household level (Sutton *et al.*, 2011: 5; citing Anon 2008). In the 2009 revision of the UAP, the MoWR made implementation of low-cost infrastructure at household level, which refers to 'self-supply', a key approach to achieving its policy goal (MoWR, 2009a). However, in 2010, the Ministry had taken no real steps to implement this new policy direction. At the time of my fieldwork, self-supply schemes were not considered improved water supply infrastructures in the Southern Region and, therefore, did not count as contributing to rural water access in the region.

2.3.3 Government roles and responsibilities for delivering rural water supply

Section 2.1.3 explained that the decentralised governance framework of the EPRDF government after 1992 led to devolution of responsibility for rural water supply services to the regional administrations and, a second wave of decentralisation in the early 2000s, further down, to *woreda* administrations. In the water sector, the establishment of separate decentralised structures was slower. In the Southern Region, water experts were employed first under the agriculture office. Water desks were set up in 2006 and became independent of the agriculture sector only in 2009.

Below, I outline the roles and responsibilities of government bodies with regard to the project cycle and O&M activities at the different administrative levels in Ethiopia and comment on the challenges related to fulfilling these in practice. My explanations, which are summarised in Table 2.2, refer to the Southern Region where, as explained in Section 2.1.3, zones are democratically constituted. In other regions, the administrative set up below the regional level may differ.

The MoWR mandate at the federal level with regard to rural water supply is mainly regulatory involving issue of directions via policies, strategies and action plans, setting national standards and supervising their implementation (Lemma, 2006: 7). Within the MoWR, water supply and sanitation is one of nine directorates (Interview #64). This directorate also hosts project implementation units for several sector donor programmes and the National WASH Coordination Office, which coordinates all WASH activities across the water, health and education ministries (MoWR *et al.*, 2006a).

Table 2.2 Roles and responsibilities for rural water supply in the Southern Region, 2010

	Overall role	Implementation responsibilities	Operation & Maintenance related responsibilities
Federal Ministry of Water Resources	Setting policy directions and standards, regulation, technical support to Bureaus	No direct involvement	No direct involvement
Regional Bureau of Water Resources	Strategic planning, monitoring, reporting and regulation	Study, design and construction supervision of large schemes e.g. multi-village schemes	Technical support for major breakdowns of DWs and large schemes
Zonal Water, Mining and Energy Department	Technical support to woreda WME offices, consolidation of plans and reports	Study, design and construction supervision of SWs and DWs	Technical support to woreda WME offices on scheme maintenance, consolidation of reports
Woreda Water, Mining and Energy Office	Planning for rural water supply, monitoring and reporting	Study, design and construction supervision of PSs and HDWs	Support to WASH Committees on scheme operation and repair, chlorination

Source: Arsano, Mekonnen *et al.* (2010)

Bureaux of Water Resources (BoWR) at the regional level are the executive bodies responsible for implementing the federal policies, strategies and action plans in line with their specific regional contexts, and carrying out regulatory duties (Arsano *et al.*, 2010: 9). In terms of the project implementation cycle, there is a division of labour in study, design and supervision of schemes in accordance with the capacities of the sector offices at different administrative levels. The BoWR studies, designs and supervises the construction of large-scale water supply infrastructure such as multi-village schemes across the region. In terms of O&M, there is a similar division of labour. The BoWR carries out repairs that are considered to be beyond the capacity of *woreda* and zonal sector offices. In addition, the BoWR houses the regional WASH Coordination Unit, which, in practice, mainly coordinates donor-funded WASH programmes.

At zone level, the water resources sector is joined with the mining and energy sectors within the **Water, Mines and Energy (WME) Department**. The main role of the WME Department is to provide technical support to *woreda* sector offices and to facilitate interaction between regional and *woreda* levels (Arsano *et al.*, 2010: 9). In the Southern Region, where zones are democratically constituted, zonal governments, in theory, can mobilise their own financial

resources to implement rural supply schemes. In practice, though the main activities of the zonal WME departments I visited were consolidating plans and reports from the *woreda* level and studying, designing and supervising the construction of shallow and deep wells. Zonal WME departments also provide technical support to *woreda* sector offices for rehabilitating broken down schemes (Interview #211).

At the *woreda* level, the water sector is represented by the **WME Office** which has had representation on the *Woreda* Council since 2010. This is an important development because, as noted in Section 2.1.3, since fiscal decentralisation to the *woreda* level in the early 2000s, the *woreda* block grants allow some degree of decision making on service delivery at this level. The WME office is the body responsible for planning and monitoring rural water supply in their particular areas. In terms of the project cycle, WME offices study, design and supervise the construction of low-cost schemes, namely HDWs and protected springs. In relation to O&M, WME offices provide capacity support to WASH committees which, in my case study *woreda*, includes follow up on tariff collections, technical support for scheme maintenance, and chlorination (WME Office 2008). In addition, WME offices act as the secretariat for the *woreda*-based WASH coordination structures. While there were no paid water sector staff at *kebele* level, in theory, a WASH coordination committee exists, under the *kebele* administration. In practice, the WASH coordination structures at *woreda* and *kebele* level are not yet present, or not fully functional in many places.

In reality, various issues hamper the regional, zonal and *woreda* sector offices from carrying out their respective roles and responsibilities to the full. I discuss gaps in budgeting and strategic planning for rural water supply at the regional and *woreda* levels in Chapter 8 where I address the uptake of monitoring data to inform decisions related to rural water access. Here, I limit the discussion of the gaps between theory and practice, to various contextual challenges related to project cycles and post-construction O&M responsibilities.

During a project cycle, the responsibilities of government staff are well defined and government officers often can count on logistical support from donor programmes and NGOs to carry out their activities. However, sector staff face substantial practical challenges in fulfilling their roles and responsibilities. Capacity constraints affect the project cycle, for instance, when government officers responsible for supervising construction activities do not have adequate transport or for some other reason fail to fulfil this role. This applied to one of my project locations, where poor supervision had contributed to a poor quality water supply infrastructure. Bad quality work can considerably shorten the lifespan of a scheme and puts an additional burden on the community, which is principally responsible for managing the infrastructure. While levels of corruption are considered to be low in the Ethiopian rural water sector, a recent study by Roger Calow and colleagues (2011) found that procurement and construction are the areas most vulnerable to mismanagement. So, while supervision as the monitoring of an activity is not part of PM, which is the monitoring of results, it can have important repercussions for rural water access. Furthermore, the number of study and design documents submitted for shallow wells and deep wells in their areas varies among zonal WME departments. In the allocation of financial resources for scheme constructions across the region, the existence of more documentation increases the likelihood of receiving a regional budget allocation from the BoWR (Interview #20).

When it comes to post-construction support, a further challenge is the lack of operationalisation of water supply operation and maintenance policy. Regional level proclamations do not sufficiently clarify the roles and responsibilities of the BoWRs with regard to implementing federal water policy, which weakens the translation of policy into practice (Lemma, 2006: 16). In the Southern Region, this is apparent in the weak role of the community management section within the BoWR which has no specific tasks, or specific budgets for particular activities (Interview #111). Furthermore, operational budgets, staffing and logistics to support water committees in their O&M tasks are insufficient at all levels -

from the regional BoWR to the *woreda* WME office (Lemma, 2006: 9). In the Southern Region's BoWR, availability of equipment constitutes a bottleneck. For example, the Bureau's maintenance team has only two trucks to carry out major maintenance work across 134 rural *woredas* (Interview #20). In all zonal and *woreda* WME offices I visited, sector staff struggle over problems related to lack of transport and fuel and, in more remote *woredas*, staff which might number only one or two persons. The fact that, at a zonal WME evaluation meeting I attended, WME officers cited these three issues as their major challenges is a further indication that logistical bottlenecks are widespread. These logistical and structural problems also affect implementation of the MoWR's regular reporting activities, which I discuss in the next section.

2.3.4 Sector monitoring of rural water supply

In the MoWR, the Directorate of Planning coordinates the sector's monitoring activities. Government monitoring consists of quarterly progress reports based on information provided by the *woreda* level WME offices and compiled at the zonal level before presentation to the regional BoWRs and federal MoWR. The monitoring reports refer to activity outputs. For activity monitoring, the reporting format lists various steps marking progress in the project implementation cycle and includes a section on maintenance activities by scheme type (BoWR, 2009b). Output reporting, which refers to PM, WME offices reports on the number of schemes completed in their *woredas* over time, based on their existing records and newly finished projects; they report also on the functional status of schemes. These reports are submitted at quarterly meetings or via verbal communication (Interviews #4, 96, 177).

As with other responsibilities related to post-construction support, reporting on outputs is not fully operationalised in Ethiopia. In contrast to reporting progress on construction activities, an update on scheme functionality status is an extra activity. In the absence of a unified procedure for regular reporting on scheme functionality status, fulfilment of this task is left to the individual WME offices. Based on observation during my fieldwork, the offices' ability to

collect these data depends on their staff capacity, their logistical resources and the motivation of individual sector experts to develop strategies for collecting regular data. So, although there may be a reporting format for monitoring scheme functionality, this part of the monitoring process was not fully operationalised in Ethiopia at the time of my field work. This is a problem that extends to the water sectors in other Sub-Saharan African countries.²² My previous experience in the sector mapping rural water access, I found updating the functionality status of rural water schemes was a problem in Ghana, Nigeria, Malawi, Tanzania and Uganda (see Welle, 2006, 2007b).

In addition to regular reporting, sector ministries conduct occasional scheme inventories to update and correct their data. In Ethiopia, in the second half of 2010, the federal MoWR was about to undertake such an inventory for the first time (MoWR, 2009b); previously, inventories were carried out by individual regional governments. These regional inventories did not use a standard format, were not carried out in the same time frames and did not cover the whole territory of Ethiopia (Etherington *et al.*, 2008). There was an inventory carried out in the Southern Region in 2008. This inventory serves as one of my cases for detailed analysis of the political and power dynamics of monitoring processes in Chapter 7. Next, I turn to donors and NGOs supporting rural water supply in Ethiopia.

2.3.5 Partners in rural water supply

In Ethiopia, external development partners – bilateral and multilateral donors and NGOs – play a substantial role in the provision of rural water supply. The MoWR estimates that, between 2006 and 2008, financial contributions by donors and NGOs combined, amounted to 49% of the total funding for rural water supply schemes (MoWR, 2008a). This figure might be even

²² In their background paper for the “Monitoring Sustainable WASH Service Delivery Symposium” held in April 2013, Smits *et al.* (2013) classify scheme functionality as an outcome. They further report that, traditionally, sector monitoring has focused on monitoring outputs such as access and observe that “recent monitoring initiatives have started going beyond measuring access, adding the functionality status of the assets” (Smits *et al.*, 2013: 3). DFID’s portfolio review (2012b) also found that reliable data on rural water supply functionality is lacking. The donor launched a large call for operational research to update the operational sustainability of WASH services in Africa and South Asia in 2013.

higher in reality because it is likely that not all NGO activities and multi-sector donor funding for rural water supply are captured at the federal level, a point I discuss in more detail in Chapter 8.

In terms of the implementation models of Ethiopia's external partners, a distinction can be made between NGOs who operate completely outside the government, multi-sector programmes that are largely integrated into the Ethiopian government's systems and working procedures, and sector donor programmes whose delivery modes differ in various degrees from the government approach.

NGOs operate outside the government structures to implement rural water supply schemes. They report to and their operations are monitored by the Ethiopian government in line with federal and regional NGO guidelines (BoFED, 2006). The actual level NGO collaboration with relevant sector government offices can differ widely in practice. In my case study areas, NGOs rely on WME offices for support during the project implementation cycle. A national Water and Sanitation Forum, which represents local and international NGOs in the water supply and sanitation sector in Ethiopia, estimates that approximately 100 NGOs were active in water supply in 2010 (CCRDA, 2010: 17). However, this number might be significantly higher. In the Southern Region, the report lists 17 NGOs active in rural water supply, while internal BoWR records show 39 NGOs as active in the sub-sector.²³ The major NGOs with operations in rural water supply have a common national level platform via the Water and Sanitation Forum and, through this platform, major NGOs are in dialogue with the MoWR on major sector reform processes.

²³ Another indication that the total number of NGOs operating in Ethiopia may be higher than those captured by the Ethiopian national water sector NGO network is a quick comparison with Uganda. In Uganda, the national water and sanitation network, UWASNET, has 187 member organisations (UWASNET, 2012) although the country's total population (30 million) is much smaller than Ethiopia's population (80 million). This comparison is based on the assumption that Ethiopia has a similar number of water supply projects per capita as Uganda.

Contributions from multi-sector development programmes, that is, the PSNP (Productive Safety Net Programme) and the Protecting Basic Services Programme, reach *woreda* administrations via the aforementioned government block grants through funds earmarked for basic services, including rural water. The budget that *woreda* administrations allocate to rural water supply – for the construction of protected springs and hand-dug wells, and scheme rehabilitation – is implemented following the government roles and responsibilities outlined above. According to a recent Public Finance Review by the World Bank (2009: 54), these programmes represent one of the largest contributions to rural water supply.

Sector donor programmes have very complex arrangements for implementing rural water supply in Ethiopia. The complexity relates partly to the way in which some sector donor programmes are designed to boost implementation of sector reform processes. The involvement of sector donors in reforms also means that their programme implementation guidelines are in a state of flux. In Chapter 8, I discuss the negative repercussions of these complex and parallel arrangements for planning and implementing rural water supply services.

In 2009/10, the main donors in the rural water supply sub-sector were the WB, DFID, the African Development Bank (AfDB), UNICEF, Finland and the Japanese International Cooperation Agency (JICA). At the time of my stay in Ethiopia, the WB's Project Implementation Manual was used as a model to assist the MoWR (2004b: 14) in implementing a "demand-responsive" and "performance-based" approach to the sub-sector. In essence, the idea was to use the WB's Project Implementation Manual (PIM) to put into practice the policy directions set out in the sector policy and strategy, and to build capacity at *woreda* WME offices for a participatory bottom-up approach to WASH planning and implementation. DFID, the AfDB and, later, also UNICEF broadly followed the WB's implementation approach under the WASH Programme after revision of the PIM in 2008 (MoWR, 2008b). The remaining sector donors, Finland and JICA, had separate implementation models that were not primarily geared

towards supporting sub-sector reform processes. Later, the term 'WASH Programme' evolved further to represent all activities in the sub-sector on water supply, sanitation and hygiene across the water, health and education sectors (McKim, 2009).

In 2009, an important issue with regard to the implementation of the WASH Programme was the low rate of budget utilisation by individual sector donor programmes: 44% for the WB and 27% for the AfDB, compared to over 90% for government block grants. The low budget utilisation rate is mainly a result of the parallel accounting and procurement systems and procedures imposed by these donors (WB, 2009: 58-67). The administrative bottlenecks created by these parallel systems considerably slow activities, negatively impact on staff morale and anger prospective users (Welle *et al.*, 2009).²⁴ It is important to note that these severe delays, which had a strongly negative effect on the implementation of rural water infrastructure, were not subject to PM discussions in Ethiopia.

2.4 Summary of the contextual issues affecting performance monitoring of rural water access in Ethiopia

Although Ethiopia has a decentralised governance structure, political decisions are mainly in the hands of the EPRDF ruling party, whose membership effectively acts as a shadow structure behind formal democratic institutions. With no significant locus of power outside the party structure, the social organisation of the country is closely linked to the organisation of the party and its political directions. This means also that decisions about the distribution and quality of basic services, including rural water, are related to the internal governance of the EPRDF. At the same time, other factors suggest limited space for debate. For instance, the ruling party is not a one-dimensional entity. In the Southern Region, where my case study is based, a fair distribution of resources among different ethnic groups is a factor influencing

²⁴ The WASH programme was nicknamed '*wushet*' meaning 'liar' in several regions because of the perception of severe delays in implementation.

government budget allocations for rural water schemes. Furthermore, rural water supply is not as highly politicised as, for instance, the issue of hydropower, in Ethiopia. In the case of hydropower, the policy space for debate is narrow because the Ethiopian government has a strong political position on the topic. In rural water supply on the contrary, various sector internal and external debates around monitoring since 2005 indicate a general openness within the Ministry to make use of external support to implement sector reforms. I discuss the relevant sector reform processes in more detail in Chapter 3.

In rural Ethiopia, water availability and household water needs, two contextual factors that influence 'access', are very diverse. Water availability changes largely in line with the agro-ecological zones in the country. Water availability varies within and between years in Ethiopia, leaving households with the imperative to adapt diverse strategies to cover their daily water needs. Importantly, households do not make a strict distinction between water for domestic and productive uses, which is in contradiction with the provision of domestic water infrastructure and related monitoring activities. Water demand depends on multiple factors, including peoples' livelihoods, settlement patterns and access to alternative, improved and unimproved water sources.

The organisation of the rural water sector in Ethiopia also has a number of implications for monitoring practices and the use of monitoring information.

First, it is important to acknowledge the impressive achievements in increasing the number of rural water supply schemes since the early 1990s in rural Ethiopia, from around 6,000 schemes, to 92,588 rural water schemes inventorised during the National WASH Inventory in 2010/11 (MoWE, 2012a). Despite the achievements in expanding the rural water supply infrastructure, important bottlenecks remain in the sub-sector: The predominant service delivery model for rural water supply in Ethiopia, CBM, focuses on technical aspects largely confined to the

project delivery cycle. Monitoring practices also are geared towards that project cycle, particularly for actors external to the Ethiopian administration, namely donors and NGOs.

The profound changes in Ethiopia's governance structure since the beginning of the 1990s, mainly characterised by fiscal and administrative decentralisation to *woreda* administrations that led to the establishment of *woreda* WME offices, provided the preconditions for a bottom-up planning and monitoring process related to rural water supply. At the same time, the lack of formalisation of federal policy directions relating to CBM at the regional level and below has been a barrier to support for WASH committees, the main bodies responsible for O&M of rural water services. Together with the lack of logistical support, personnel and capacity, this means that in practice, both sector monitoring and follow up on monitoring results, are hampered. Furthermore, the large external support for rural water supply channelled outside of government fiscal and administrative systems makes the delivery of rural water supply services and the monitoring process more complicated.

In Chapter 3 I investigate the historical roots of PM, its conceptual underpinnings, and recent applications in development cooperation in general, and the rural water sector more specifically.

3 Performance Monitoring in Development Cooperation

Chapter outline

“[M]uch development and humanitarian thinking and practice is still trapped in a paradigm of predictable, linear causality and maintained by mindsets that seek accountability through top-down command and control”. (2008: vii)

The paradigm of ‘linear causality’ referred to in the quote above by Robert Chambers is embedded in PM, a monitoring approach aimed at measuring results. Chapter 3 introduces and discusses PM and its role in Results-based Management (RBM), a management model that focuses on performance improvement. I explain the central role of PM in development cooperation, including in rural water supply. Section 3.1 outlines the historic roots of ‘performance’, and explains and discusses the definitions of PM and of RBM. Section 3.2 presents two examples of public sector PM and RBM implementations that focus on accountability, followed by a discussion of key criticisms of PM. Section 3.3 traces the emergence of a results-based agenda in development cooperation since the 1990s and its manifestation in PM of water access at the global level, and at the country level in Ethiopia. Section 3.4 concludes the chapter by summarising the discussion and introducing the research question that motivates the investigation in my thesis.

3.1 Explaining Performance Monitoring and Results-Based Management

Performance means different things to different people (Ramalingam *et al.*, 2009). The monitoring of performance does not have a specific theoretical base nor does it refer to a unified method or procedure (Lebas and Eusks, 2007), but merely to the measuring of results. The diversity of views on performance is related also to the fact that there are many different and overlapping approaches, all referred to as performance, across the private and public sectors. This stems from its historical roots discussed below.

3.1.1 Historical roots of performance

Current approaches to performance evolved in the private sector during the period of industrialisation, however, its roots also go back much further. They are linked to principles used in three different areas: (1) military strategy devising a hierarchy of goals and developing tactics to achieve them; (2) tax collection using surveys, documentation and reporting to determine what people own and to ensure taxes are collected; and (3) principles in crafts where training, supervision and standards are used to pass on specific skills (Ramalingam *et al.*, 2009).

The modern foundations of performance were laid by Adam Smith. He analysed the business of producing pins by splitting the process into the specific tasks involved, studying how they were performed, and measuring their efficiency by comparing results. At the beginning of the 20th century, Frederick Taylor, a US industrialist, applied Adam Smith's approach to devise specific management strategies for factory work processes. He established a scientific approach to management through the introduction in the production process of 'scientific principles', aimed at achieving greater or even output at lower costs.²⁵ The approach spread after being successfully applied by Henry Ford in the automobile industry for the mass production of cars (Ramalingam *et al.*, 2009). In current performance literatures, Taylor's approach is often referred to as 'scientific management' or the 'scientific method'. Critics argue that this approach is based on a positivist world view and a "belief in objective measurement" (Lynch and Dicker, 1998 cited in Hailey and Sorgenfrei, 2004: 4), which, in turn, is mobilised by discourse coalitions to support a specific story line about the relationship between monitoring and decisions on rural water supply (Hajer, 1995), a point I elaborate in Chapter 4.

²⁵ The scientific principles were linked to his study of work methods, training and employment, supervision, time management and payment incentives (Kanigel, 1997 cited in Ramalingam *et al.*, 2009: 12-13).

In parallel, at the beginning of the 20th century, other industrialists introduced principles that led to two further strands related to performance: the quality control movement, and systems of audit and financial management. In the context of this thesis, the principles associated with ‘scientific management’ are most relevant because they evolved into Management by Objectives and Results-Based Management (RBM). In the 1950s, Peter Drucker, an influential writer on management theory and practice, introduced the model of Management by Objectives in organisational management. He devised a participatory process to set organisational goals that cascaded down in the organisation via objectives and targets and also linked individual employees’ objectives to the broader organisational goal (Ramalingam *et al.*, 2009).

What is important about the roots of performance is their firm base in the private sector and close link to work processes in factories and, later, different types of organisations. The RBM model has its roots in the principles of ‘scientific management’ developed by Taylor to increase the efficiency of factory outputs. Positivist thinking related to ‘scientific methods’ is still prevalent in current conceptualisations of PM. In the next section, I explain the process of PM and its role in RBM in more detail.

3.1.2 Definitions and concepts related to performance monitoring

RBM is a management strategy that focuses on improving performance (Binnendijk, 2000b).

PM is central to RBM in that it is set up to measure progress between setting objectives and achieving results. In the field of development cooperation, the OECD Development Assistance Committee’s (2010) *Glossary of Key Terms in Development Evaluation and Results-Based Management* is the source most commonly cited by development practitioners.²⁶ Since the OECD glossary represents the most widely shared interpretation of the concepts related to PM

²⁶ The glossary was first published in 2002, and republished without textual changes in 2010. My citations refer to the 2010 page numbers.

in the aid sector, I mainly refer to this document in the discussion below of definitions and key terms. I also discuss disagreements among professionals, where they arise.

According to the OECD (2010: 29), PM refers to "a continuous process of collecting and analysing data to compare how well a project, programme or policy is being implemented against expected results". The immediate question provoked by this definition is what is the meaning of results? The OECD (2010: 33) defines results as "the output, outcome or impact (intended and unintended, positive, and/or negative) of a development intervention".

It is important here to note that not all authors agree with the OECD's definition of results. Some authors do not regard outputs, namely the "products, capital goods and services resulting from the intervention" (OECD, 2010: 28), as a development result. In the WB's handbook for development practitioners on RBM, the authors Jodey Kusek and Ray Rist (2004: 16), argue, for instance, that outputs should not be regarded as a development result because they do not answer the "'so what' question". According to them, the building of a water supply scheme, for instance, does not supply the answer to the 'so what' question because it does not provide information about the results that emanate from completing this infrastructure project. In comparison, outcomes, and impacts, which refer to the short, medium and long term effects of an intervention's outputs (OECD, 2010: 25, 29)²⁷, provide direct information on the progress made towards the achievement of their specific development goals (Kusek and Rist, 2004: 12). Werner Meier (2003: 8), who reviewed RBM approaches for the OECD, also holds that PM is usually outcome-related. However, others argue that there is a disconnect between the outputs that are largely under the control of a

²⁷ The full definition of impacts as "positive and negative, primary and secondary long-term effects, produced by a development intervention, directly or indirectly, intended or unintended" (OECD, 2010: 25) recognises a more intermediate relationship with development interventions.

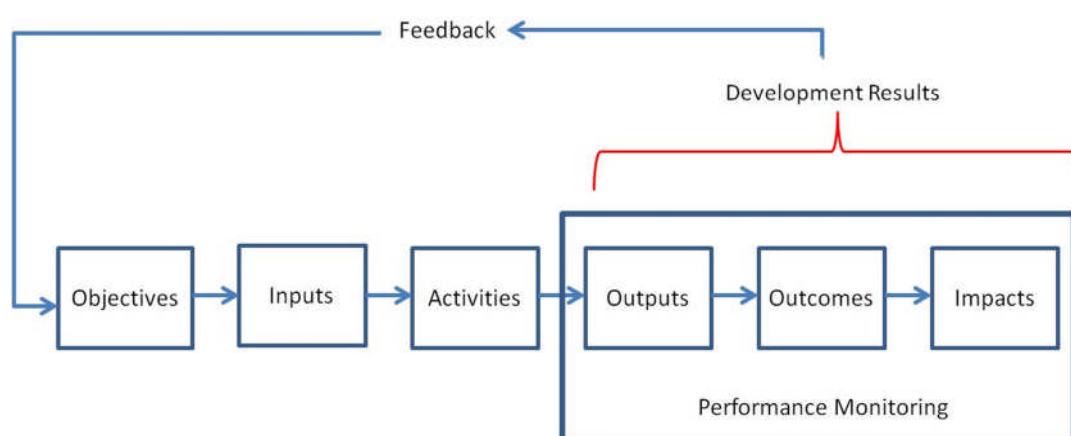
programme, and outcomes and impacts which are more distant and less under the direct control of any targeted intervention (Bouckaert and Halligan, 2008: 17).²⁸

Underlying the measurement of performance is an assumption that there is a linear cause-effect relationship between development interventions and their results. This assumption is made explicit in the OECD's (2010: 33) glossary entry on the 'results', defined as

the causal sequence for a development intervention that stipulates the necessary sequence to achieve desired objectives – beginning with inputs, moving through activities and outputs, and culminating in outcomes, impact and feedback.

The illustration in Figure 3.1 highlights the single-stranded character of the cause-effect chain in the OECD definition.

Figure 3.1 Illustration of the OECD results chain



Source: Author

Figure 3.1 highlights the linear causality running from setting objectives to measuring development results in the prescriptive policy model underlying PM. The role of PM in this

²⁸ With regard to rural water access, a typical example of an outcome is the 'distance walked to the source' while 'health improvements' are an example of an impact (Poulos *et al.*, 2006: 15), but many other interpretations are possible. The different interpretations of results in relation to rural water access are an important source of contestation at global, national and local levels. In section 3.3.2 I present this conflict using different presentations of rural water access in Ethiopia. I return to perspectives on rural water access in detail in the discussion of actors' rural water access framings in Chapter 6.

management model is represented in the feedback loop from results to setting or revising objectives. One observation in relation to this model is that the objective at the beginning of the results chain is closely related to the desired outcome and impact. For example, the MDGs, in themselves objectives, refer to development outcomes and impacts, the ultimate desired result being a reduction (by half) in poverty. Furthermore, the feedback loop in the results chain implies a linear relationship between performance measurement and objectives. However, as discussed above, development results can be interpreted as outputs, outcomes or impacts, which leaves room for interpretation of what exactly a development result represents. Furthermore, the linear conceptualisation of the results chain is not well suited to address uncertainties and the unexpected. For instance, repeated monitoring based on particular indicators will only tell a story line from the perspective of these indicators rather than explicitly exploring other factors that might challenge the hitherto established world view.

The uninterrupted arrows in the representation of the results chain in Figure 3.1 represent the broader concept of RBM. The OECD Glossary (2010: 34) defines RBM as “a management strategy focusing on performance and achievement of outputs, outcomes and impacts”. This definition of RBM puts the results chain within a broader public sector management model, which assumes that PM results provide a uniquely rational basis for decisions. Kusek and Rist (2004: 12) summarise this logic, explaining that:

“A results-based M&E system is essentially a public management tool governments can use to measure and evaluate outcomes, and then feed this information back into ongoing processes of governing and decision-making.”

Underlying this management model is the idea that policy processes follow a single-stranded flow, from the setting of objectives in the form of desired results, to their achievement, and that PM functions as a tool to uphold the loop between them. This model is based on a linear understanding of change, the idea that policy results can be achieved by employing the ‘scientific methods’ introduced by Frederick Taylor in the early 20th Century (Rebien, 1996: 20).

The linear understanding of change relates to a rational interpretation of the policy model, the idea that monitoring interventions against results can be used in a rational way to arrive at decisions about the social intervention in question. I discuss the alternative interpretations of the rational versus the incrementalist view on the policy model in Section 4.3.1.

Proponents of RBM argue that the strength of this management model is that it reduces a complex reality to a limited set of desired objectives and suggests a rational chain of inputs and activities to achieve them. The power of performance measurement within this model is that it provides a “common language and framework” (Power, 2004: 774) that results in the reduction of complexity and thereby facilitates decision making. PM is valued also for its capacity to highlight an organisation’s strengths and weaknesses, thereby allowing managers to allocate resources more efficiently and effectively (Czarnecki 1999, cited in Hailey and Sorgenfrei, 2004: 3). Externally, PM helps to hold an organisation accountable to its stakeholder by tracing whether it is achieving its objectives (Hailey and Sorgenfrei, 2004: 3). The reference to accountability in relation to PM is particularly strong in the introduction of PM in the public sector, which is the focus of the next section.

3.2 Performance monitoring in the public sector

RBM is widely used across the private and public sectors (Hatry, 1997, Perrin, 1998: 374, Van Thiel and Leeuw, 2002, Greiling, 2006), including the aid sector (Binnendijk, 2000a: 3, Picciotto, 2002: 13, Mayne, 2005), and among NGOs (Hailey and Sorgenfrei, 2004, Ramalingam *et al.*, 2009). As explained in section 3.1.1, over the years, PM has assumed different forms, focusing at different times, for instance, on the measurement of efficiency or value for money, total quality management, and other aspects (Hailey and Sorgenfrei, 2004: 9). At the same time, alternative monitoring techniques have been developed to address some of the criticisms related to earlier approaches. In development cooperation, for example, Outcome Mapping, a

process-focused tool that measures results in terms of changes in peoples' behaviour, is closely related to a development intervention rather than presupposing a particular input-result chain (Smutylo, 2005). Another methodology, Participatory Rural Appraisal, includes a group of appraisal methods that aim to put local people at the forefront of the analysis and subsequent planning and action regarding their life conditions (Chambers, 1992). However, these alternatives remain at the margins of public-sector measurement systems. PM is at the forefront for measuring the success of public sector interventions, whether in OECD countries, or countries that have signed up to the aid effectiveness agenda, or those in the UN system. As indicated above, a central argument for introducing PM in the public sector is its premise on increasing public accountability, which I demonstrate and discuss below, based on two specific historical examples.

3.2.1 Public sector performance monitoring and accountability

According to Daniel Williams (2003), the notion of performance measurement has been around in the public sector in the United States at least since 1912. Williams (2003) found evidence that, at that time, a public bureau in New York practised principles related to PM such as the measurement of outputs; he establishes links to the more recent waves of PM in the public sector since the 1970s. According to Williams (2003: 655), in the early 20th century, the perception of corruption and waste of resources in government were key factors that led to the introduction of PM in the public bureau.

While various approaches related to PM continued to be introduced in the public sector after the second world war, it was not until the 1980s that performance became a key aspect of public-sector management (Hailey and Sorgenfrei, 2004). In the 1980s, at a time of global recession, governments were challenged by public perception of public services as inefficient and expensive, and consuming too much of the domestic product (Mayne and Zapico-Goni, 1997: 6). Faced with the need to cut back public spending, governments turned to a new way of managing public services, commonly associated with the term New Public Management

(NPM) (Hood, 2001). As part of these reforms, governments also introduced a wave of performance-based measures in the public sector. In essence, NPM is related to the argument put forward in the American bestseller by Osborne and Gaebler (1992) quoted in the introduction to this thesis, that governments need to “reinvent” themselves, by becoming more entrepreneurial. Some of the trends associated with NPM are a greater emphasis on the delivery of more efficient, affordable and higher quality services, and the introduction of management principles from the private sector to achieve this (Mayne and Zapico-Goni, 1997: 6, Hood, 2001). In essence, PM, with a focus on monitoring the results of public services, was seen as essential for making the public sector more economic, efficient and effective (London, 1994).

The context in which PM was argued for in the 1912 example, as well as in the more established example of NPM from the 1980s onwards, points to a resort to PM in times of governance crisis. In the early 20th century, the New York public bureau faced allegations of corruption and mismanagement of public resources. Similarly, in the 1980s, NPM reforms became popular at a time when the public sector was perceived as inefficient and ineffective. PM, in this context, can be seen as a means to restore trust with the public by appearing to increase accountability, for instance, by invoking the image of an efficient manager.

The above analysis is informed by the writings of Peter Aucoin, a Canadian academic who worked on reform of public administration. According to Aucoin, NPM reforms have some basis in the managerialist school of thought, which argues for getting rid of bureaucratic rigidities and focusing instead on the mission, personnel and customers of the organisation (Aucoin, 1990: 118). In essence, the managerialist school replaces the paradigm of the public servant whose main task is to follow procedures, with the image of the manager who is focused on achieving particular ends for the organisation. Among other things, this implies Management for Results (MfR). In organisational terms, this design relates organisational

authority, responsibility and accountability to its resources, outputs and results (Aucoin, 1990). MfR, based on the ideas of Management by Objectives introduced by the management specialist Peter Drucker in the 1950s, puts emphasis on achieving accountability through internal learning, and the role of PM in that being to support a management culture focused on results. However, in the public sector the implementation of such ideas has been problematic, for reasons I discuss through the criticisms put forward against these concepts, presented in the next section.

3.2.2 Critiques of performance monitoring in the public sector

Much criticism of PM and RBM in relation to public sector programmes, relates to the technicalities and practicalities related to their implementation rather than the rationale behind the concepts themselves (Hailey and Sorgenfrei, 2004: 13). For example, John Mayne (2005) discusses 12 organisational and technical challenges related to implementing RBM in public sector organisations, identified in an OECD review of 26 member states.

One of the key criticisms of PM questions the very logic of monitoring for results, focusing on the downsides that were described as important strengths in section 3.1.2. Specifically, critics argue that PM misrepresents a complex reality by its reduction to a few, measurable results (Power, 2004: 774). Results are represented by a “small number of quantitative indicators, which can actually disguise and mislead rather than inform what is really happening” (Perrin, 1998: 372). In this context, it is argued that developing indicators is a political process, since indicators will represent only a particular perspective of a more complex reality, but not necessarily a relevant one (Newcomer, 1997 cited in Perrin, 1998: 372). An example of a misrepresentation of reality through PM is the emphasis that audits put on the economic dimension of an organisation’s performance, the value for money, to the detriment of other aspects related to effectiveness and efficiency (Power, 1997: 51).

The measuring of complex reality based on a few indicators has been criticised also for creating perverse incentives (Perrin 1998). A famous example of a perverse incentive created by measurement systems was the 'body count' in the Vietnam War as a measure of success, which led to increased killings of civilians on strategically unimportant battlefields (Rogers, 2004: 2).²⁹ Others point out that pressure to meet performance targets can lead to 'gaming behaviour'. A well known example of this is the waiting lists in the UK's National Health Service. According to one report, over 50% of consultants at one point reported attending to non-urgent cases first, in order to comply with waiting list targets (NAO, 2001 cited in Ramalingam *et al.*, 2009). A more typical example in a development cooperation context is that performance measures can lead to an incentive to "neglect the poor, distant or otherwise difficult populations" (Clements, 2005: 3) since it may be more difficult to achieve measurable results when trying to reach these groups.

Furthermore, there are questions about to what extent the theoretical propositions of MfR within the managerialist school have been realised in practice in the past (Mayne, 2005). Rolf Sandahl (1997: 154) who reviewed the implementation of NPM reforms in Sweden, concludes that the relation between results-based information and budgetary process decisions was "at best tenuous". According to him, evidence from Sweden suggests that "major changes at the aggregate budget level are based on political consideration rather than information about results" (Sandahl, 1997: 154), while decisions were more likely to be based on information on results at the operative level.

There are numerous examples of limited implementation of RBM principles in the aid sector by the aid agencies of donor countries and the UN system. Werner Meier (2003: 5), who reviewed RBM approaches in development cooperation for the OECD, cautions that RBM reforms are

²⁹ The introduction of PM in the Vietnam War is associated with Robert McNamara's term as Secretary of Defense. MacNamara is said also to have used results-based management principles to transform the management of the World Bank during his presidency from 1968 to 1981 (Natsios, 2010).

relatively recent in the OECD countries. He comments also that the introduction of performance measurement is often not accompanied by wider internal organisational reforms linked to RBM. Annette Binnendijk (2000a: 4), along similar lines, observed that while many development cooperation agencies have experience in developing performance measurement frameworks, there is scant evidence on the use of this information for internal management decision making. An RBM review of various UN agencies by the UN Office for Internal Oversight Services (OIOS) reveals that RBM practice at the UN “has been an administrative chore of little value for accountability and decision making” (OIOS, 2008: 1). A weakness found by the OIOS with regard to PM is that “indicators of achievement and performance measures have generally been framed in a manner that depends upon subjective interpretation” (Hauge and Pena, 2007: 1).

The above criticisms suggest that, in reality, PM may be deeply subjective and political. They indicate also that a performance measurement culture may end up justifying and defending actions (Perrin: 1998: 375) that may have been taken for other reasons, while creating a seeming conformity with objectives based on the rational logic of the PM process. PM creates accountability and establishes control via abstract numbers. This means that, in the public sector, PM might ultimately be used as a means to create seeming public accountability, which does not hold under more thorough scrutiny.

This brief review of RBM examples in the public sector confirms a potential schism between the need to demonstrate accountability and the reality of PM in the public sector domain. Evidence from the two public sector examples described above shows that PM was introduced, at least partly, as a means to demonstrate increased accountability to the public. At the same time, commentary from reviewers of PM experiences in the public sector³⁰, indicates that there is little evidence to support a single stranded results chain between PM and decisions

³⁰ This is not to suggest that the internal logic RBM model is unproblematic in the private sector. The emphasis on the public sector relates to the thesis’ topic only.

taken. Rather than working in a machine-like fashion, as suggested by the linear model of RBM, its implementation is full of “disconnections, disruptions and disjunctions” (Ramalingam *et al.*, 2009: 24). As a result, PM can become an instrument of control rather than an approach to foster a new internal management culture (Meier, 2003: 11). This suggests that PM, in practice, may end up as mere lip service to accountability.

3.3 Performance monitoring under the aid effectiveness agenda

In the field of development cooperation, some form of PM has been practised for a long time.

Up to the 1990s, development cooperation was dominated by the implementation of so-called ‘project-aid’, specific development interventions confined to a particular geographic area. A popular tool for PM of development projects is the Logical Framework Approach (LFA), a planning and management tool originally introduced in development cooperation by USAID (Meier, 2003: 3). The LFA is based on a linear model linking inputs, activities and outputs of development interventions to a hierarchy of development objectives (Hailey and Sorgenfrei, 2004: 13)³¹. In the 1970s, single, isolated projects gave way to more comprehensive programmes, typically aimed at integrated rural development (Hyden, 2005), but still using an adaptation of the LFA. In the 1980s, market principles entered the realm of development assistance under neoliberal reforms of structural adjustment, leading to the outsourcing of scheme management to user committees and demand-based approaches in the water sector discussed in the introduction. By the 1990s, the existing project-based approach to development cooperation was facing criticism for failing to bring about sustainable and more

³¹ The LFA originally was developed in the 1960s for military purposes, and adopted as a planning tool by NASA before being applied to development by USAID. The roots of the LFA in the US military provide an interesting link to the reference to performance origins in military strategy. In development cooperation, the LFA has been widely used as a planning tool since the 1970s. While the strength of the LFA is said to lie in the reduction of a complex reality to a simple set of causal relationship between inputs, activities and outputs, it has also been widely criticised as a ‘blueprint approach’ to development, that takes no account of the complexity of real-world situations (Hailey and Sorgenfrei, 2004: 13). An adaptation of the LFA by German development cooperation, a version that fosters stakeholder participation throughout the project cycle, became popular in development projects in the 1970s and 1980s (Pollvogt, 1987 cited in Welle, 2003: 672)

widespread change (Berg, 1993).³² The new argument was that unless people owned their development process, aid would not be effective. This led to the emergence of a new paradigm in the 2000s, the aid effectiveness agenda (Hyden, 2005).

3.3.1 The aid effectiveness agenda

In the 1990s, the perception among the public in donor countries that development interventions were inefficient and ineffective, contributed to ‘aid fatigue’ and declining aid budgets, similar to what happened in cases of RBM introduction in the Western hemisphere, discussed above. It is in this context that a results-based agenda was introduced to the development cooperation context (Binnendijk, 2000a: 3). At a global level, the new focus on working towards development results is represented in the Millennium Declaration ratified by 189 Heads of State, and containing a set of 8 MDGs which aim to halve poverty by 2015 (UN, 2000). With regard to water, the MDG target 7c specifies “to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation” (UN, 2008). Under the banner of ‘making aid more effective’, a number of reforms have been introduced to development cooperation with the overall aim of improving the delivery and management of aid in order to achieve longer lasting results.

These global reform efforts towards increased aid effectiveness are closely related to the multilateral development banks (Christiansen and Hovland, 2003). In the World Bank, principles of RBM were originally introduced under the presidency of Robert McNamara (1968-81) (Natsios, 2010). The drive towards aid effectiveness happened much later, though, in the late 1990s, driven by the aforementioned criticism of project aid, a popular movement for debt relief,³³ and by the wider shift from structural adjustment – an economic-led agenda – to a more governance-based paradigm in development cooperation concerned with ‘getting the

³² Key criticisms of project aid include: high transaction costs through separate accounting and reporting structures and tied aid; undermining of state systems by creating parallel implementation structures and special staffing arrangements; strong reliance on donor funding leading to weak long-term sustainability and a lack of democratic accountability because of arrangements geared to satisfying constituencies in donor countries (Lawson et al., 2002 cited in Christiansen and Hovland, 2003).

³³ In particular the ‘Jubilee 2000’ and the ‘Drop the Debt’ campaigns.

institutions right', a topic I introduced in Chapter 1. The push towards better governance from the multilateral institutions, particularly the World Bank, is related to the development in 1999 of Country Development Frameworks (CDFs). It is from these CDFs and from the need to establish a common mechanism between the WB and the International Monetary Fund (IMF) for debt relief under the Highly Indebted Poor Countries (HIPC) Initiative, that the Poverty Reduction Strategy Papers (PRSP) evolved in 2000, as a new approach to development assistance (Christiansen and Hovland, 2003). The PRSPs thus represent the start of a global push to make aid more effective.

A new global aid architecture was created that set out a new "*global partnership*" (Picciotto, 2002: 3; italics in original) between donor and recipient countries. This new aid architecture is underpinned by a results-based agenda developed over the course of several conferences and high level meetings in the first five years of 2000. In Monterrey, Mexico, governments agreed that levels of increased aid towards the MDGs would be matched with "better governance, reform policies, and a greater focus on development effectiveness and results" (Kusek and Rist, 2004: 4) in developing countries. The shuttle of consultations related to aid effectiveness culminated in the Paris Declaration on Aid Effectiveness of 2005. The agenda spells out five principles:

Principle 1: Ownership - aid recipients formulate their own poverty reduction strategies;

Principle 2: Alignment - donors support the national strategies and systems;

Principle 3: Harmonisation – donors synchronize their interventions in a country;

Principle 4: Managing for Development Results - development policies are directed at and monitored against achieved results;

Principle 5: Mutual Accountability – there is a joint responsibility for these goals among donors and recipients (OECD, 2005).

According to Robert Picciotto (2002: 7), when he was Director General of the WB's Operations Evaluation, the aid effectiveness agenda, with its focus on development results, represented a new paradigm in development cooperation. Under this paradigm, recipient countries develop their own poverty reduction strategies, which, with streamlined support from the donor side, set the path to achieving the MDGs. In an ideal situation, donors would directly support the budgets of recipient countries rather than setting up parallel financial systems. The logic underpinning the reforms under the aid effectiveness agenda reflects the linear results chain of PM: it holds that aid recipient countries set up their own poverty reduction goals and strategies and, through sector reform processes, align their systems to enable them to measure progress against these goals. By measuring against these goals, they increase accountability to their citizens, but, equally also, to donor countries who financially contribute to the recipient country's efforts to achieve these goals. At sector level, the aid effectiveness agenda has contributed to the emergence of 'sector-wide approaches' (SWAP). SWAP represents reform processes aimed at moving from a situation of fragmented projects to a results-based management system based on a single sector strategy and programme supported by all parties (Foster *et al.*, 2001). In the water sector, steps towards SWAP include the establishment of coordination mechanisms among donors and recipient governments, such as joint technical reviews and to common donor reporting procedures, and financing arrangements such as basket funds (DANIDA, 2006). In 2012, most countries are reported to have established sector planning and coordination processes in the water sector with the intention to use sector data to inform effective investment planning, but, so far, sector planning based on results is a challenge for many countries (WHO, 2012b: 13).

The pervasiveness of the aid effectiveness agenda is expressed in the number of related initiatives. Among the donors and recipients of aid, 114 countries have signed the Paris Declaration (Welle *et al.*, 2008) and over 65 countries have developed PRSPs (WB, 2012a). The aid effectiveness agenda also forms the basis for all funding by multilateral banks and for the

HIPC Initiative (Kusek and Rist, 2004: 3). In 2005, countries classified as poor and heavily indebted, under HIPC became eligible for 100% relief of their debts with multilateral financial institutions – the IMF, The World Bank and the African Development Bank. One of the key conditions for debt relief was the development of a poverty reduction strategy paper, an initiative to reduce the external debts of world’s poorest and most highly indebted counties (IMF, 2011).

In practice, challenges to implement this agenda are formidable, not least because the donor-recipient relationship adds to the complexity of the public policy process and has an effect on accountability relations. Furthermore, a number of new donors, such as the Chinese Government, and various Arab States, operate outside this framework (Kharas, 2007). Likewise, NGOs, whose interventions make substantial contributions in the water sector, are not part of the aid effectiveness agenda. At country level, the move towards aid effectiveness, a situation where donors are fully aligned to recipient government systems and where the latter base their policy agendas on PM results, at best, can be characterised as piecemeal.

3.3.2 Global monitoring of rural water

In the water sector, international WASH monitoring started with the first International Drinking Water Decade in 1981 to 1990. During that period, data were collected by the WHO based on country-level questionnaires, which proved hard to compare internationally (Butterworth *et al.*, 2013).³⁴ The second international water decade – Water for Life – runs from 2005 to 2015 and is based on MDG 7c, “to halve, by 2015, the proportion of people without sustainable access to safe drinking water” (UNDESA, 2012). Since 1990, global monitoring of water has become better coordinated and easier to compare across countries. At the international level, UN Water was established as an inter-agency mechanism to follow up on MDG 7c (UN Water, 2006). The agency mandated the JMP (Joint Monitoring Programme)

³⁴ The results of this first international decade, which aimed to provide water and sanitation to all, were disappointing: at the end of the decade, water provision had hardly kept pace with population growth (Carter *et al.*, 1993).

for Water Supply and Sanitation, of the WHO and UNICEF, with monitoring access to water supply and sanitation.³⁵

Although agreed on in the year 2000, the base year for monitoring progress against the MDG 7c is 1990 (UNDESA, 2012). The indicator for measuring rural water access is the “proportion of the population using an *improved* drinking water source” (UNDESA, 2012, emphasis added). As briefly outlined in Chapter 2, the term ‘improved’ refers to a certain technological standard that protects the source “from outside contamination” (WHO and UNICEF, 2010). Based on this criterion, the following sources qualify as ‘improved’ according to the JMP: “rainwater, protected spring, protected dug well, tubewell or borehole, public tap or standpipe, piped water into yard/plot, and piped water into dwelling” (WHO and UNICEF, 2010).

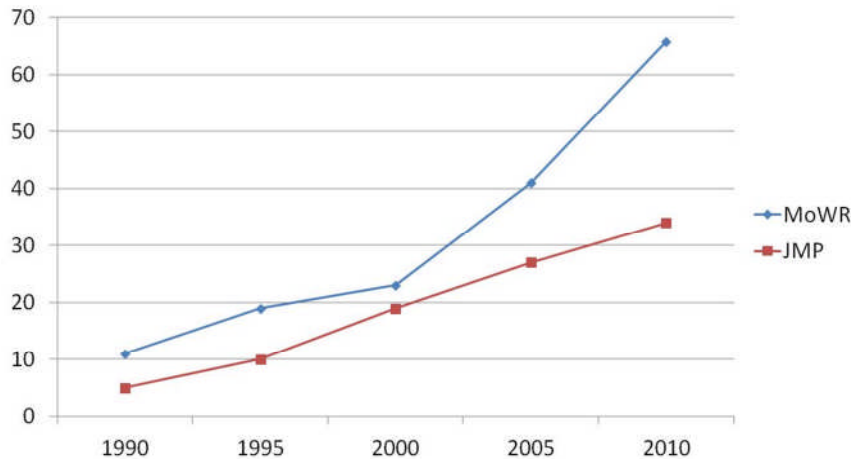
To measure progress against this target, the JMP relies on existing national representative household surveys such as USAID funded Demographic and Health Surveys or other relevant surveys administered by individual countries’ statistics departments. This means that the JMP is largely dependent on the questions developed by national statistical agencies on the type of drinking water sources used by the household. The JMP does not report information on individual surveys, but uses all available data points to draw a trend line. Reported estimates are based on the trend line even when a data point is available for the given year. Because of data availability problems, the latest survey available to the JMP may date back several years prior to the reporting year (WHO and UNICEF, 2012d). In the case of Ethiopia, the latest data available to the JMP for its report in 2010 was for year 2007 (WHO and UNICEF, 2012b).

The differences in how the JMP defines and measures global progress in rural water access compared to national line ministries results in sometimes stark contrasts among access figures

³⁵ Performance reporting on water and sanitation by the JMP is complemented by two further reports, the biennial Global Analysis and Assessment of Water and Sanitation (GLAAS), which monitors governance and institutional issues including progress on setting up and planning, against national sector monitoring and information systems at country level (WHO, 2012d), and the World Water Assessment Programme (WWAP), published every three years, which provides a strategic outlook on global freshwater sources and is organised by sector (UNESCO, 2012).

reported for the same country. In the case of Ethiopia, as cited in the Introduction, the divergence in figures is particularly pronounced: the JMP reports 34% rural water access in 2010 (WHO and UNICEF, 2012b) whereas the Ethiopian MoWE³⁶ reports 65.8% access for the same year (MoWE, 2010) (see Figure 3.2).

Figure 3.2 Ethiopia rural water access estimates by MoWR/E and JMP from 1990 - 2010



Source: various Ethiopian water sector and cross-sector reports (Rahmato, 1999, MoWR, 2002, MoWR et al., 2006b, MoFED, 2010, MoWE, 2010) and UNICEF and WHO (2012b)

Some of the criticisms of RBM discussed in Section 3.2 are evident in this brief insight into global monitoring of rural water. While I discuss different interpretations of rural water access in detail in Chapter 6, here I highlight a few issues. For instance, Indicator 7c, ‘the use of an improved source’ of the JMP highlights a narrow, technical aspect related to rural water supply compared to the complex reality of rural water access that emerges from the discussion of water availability and water need patterns in Ethiopia in Chapter 2. Compared to the JMP’s focus on the use of a particular facility designed for domestic water supply, studies into peoples’ water needs in Ethiopia highlight a great diversity in terms of needs related to

- peoples’ livelihoods (e.g. whether the household owns livestock, has a vegetable garden, brews beer);

³⁶ Here, I refer to the Ministry of Water and Energy, which succeeded the MoWR in October 2010.

- the agro-ecological zone in which the household lives (water being most readily available in the highlands and least available in the low- and drylands);
- seasonality (shallow water sources drying up in the dry season putting pressure on fewer, high yielding sources); and
- the economic status of the household (with reports of poorer households forced to reduce consumption during the dry season and droughts, while wealthier households can exploit additional labour and economic resources to maintain or increase their consumption from protected sources in these periods).

In addition, there are dimensions including water quality, gender and equity among others, but a few that are completely missing in the JMP definition are discussed in Chapter 6.

Another aspect I want to highlight at this point is the mismatch between the seeming objectivity assumed in the definition of results for PM discussed in Section 3.1.2, and the political reality of defining rural water access. The contestation over what constitutes a result comes out in the different interpretations provided by the JMP and the Ethiopian MoWE. While the JMP's target and indicator both refer to water access as an outcome (people using an improved source), the MoWE refers to it an output (infrastructure provided). Technical debates over whether a result constitutes an output or an outcome, as discussed in Section 3.1.2, take on a political character in concrete policy settings exemplified by contestations over access figures between the Ethiopian MoWE and the JMP (Butterworth *et al.*, 2013).

Insights into the problems that the JMP experiences with the practicalities of measuring also indicate that the single-stranded results chain assumed under PM is problematic. Instead, each step in the monitoring process involves a decision that has consequences for resulting access figures. For example, the JMP's aforementioned reliance on national statistical agencies of countries leads to problems of data availability with important consequences for the results the JMP reports. In the case of Ethiopia, the JMP is likely to under-report access because the last accessible data point for the agency to report for 2010 is 2007.

There are also questions with regard to the meaningfulness of the MDG 7c itself. On 6 March, 2012, the UN announced the global achievement of the MDG on water (WHO, 2012c). At the

moment of this global announcement, rural water access stood at 34% in Ethiopia according to the JMP. Yet, based on the low access in the base year 1990, namely 5%, the MDG of halving the rural population without water access had been achieved in Ethiopia (WHO and UNICEF, 2012b). When considering the MDGs in light of this concrete example, the related achievements become questionable.

As already pointed out in Chapter 1, a global consultation process to review the existing MDG targets and indicators for water supply, sanitation and hygiene has been underway since 2011. Some of the issues I point to above are currently being assessed by the technical working group on drinking water supply. I discuss current developments towards post-MDG monitoring in the light of the findings presented in Chapter 9. Next, I turn to the sector reforms that have been implemented in Ethiopia in the move towards greater aid effectiveness.

3.3.3 Sector reform processes in rural water supply in Ethiopia

In Ethiopia, water sector reforms started in 2004/5, at the time when access to water supply became a feature of the country's national poverty reduction strategy, known then as PASDEP.³⁷ While the sector previously had formulated targets towards increasing access to water supply, the new sector plan, the UAP (Universal Access Programme), substantially moved the goal posts for achieving water access. Under the UAP, the MoWR committed to increasing rural water access from 35% in 2005, to 98% by 2012 (MoWR, 2005), an initial seven-year time frame, which was extended to ten years (2015) in the 2009 revision of the UAP (MoWR, 2009a).

Also in 2005, a reform process initiated by the European Union Water Initiative (EUWI) brought together the major sector development partners and the Ministry to discuss steps towards developing a SWAP for WASH. Reform efforts focused on the domestic rural and urban water supply sub-sectors and on integration with sanitation and hygiene activities under

³⁷ PASDEP: Plan for Accelerated and Sustained Development to End Poverty.

the education and health ministries.³⁸ Starting from 2006, Multi-Stakeholder Forums (MSF) served as the main platform for discussing reform efforts between the three water, health and education ministries, sector donors and NGOs. During the first MSF, in 2006, the participants developed a list of nine sector undertakings (see Figure 3.3), based on a jointly carried out sector review (MoWR *et al.*, 2006b).

Figure 3.3 Sector undertakings agreed upon at MSF in 2006

1. Popularise and operationalise the Universal Access Programme
2. Disseminate and communicate water, sanitation and hygiene sector policies
3. Implement policy and regulatory measures to increase private sector participation
4. Establish and improve regulation for community management in the sector
5. Enhance and harmonise finance mechanisms in the sector
6. Implement Monitoring and Evaluation system for water, sanitation and hygiene
7. Plan, budget and scale up existing human resource development activities
8. Implement and monitor the WASH Memorandum of Understanding
9. Establish supply chain outlets

Source: MoWR and EUWI (2006)

Also in 2006, the ministries of health, education and water signed a Memorandum of Understanding (MoU) expressing their intention to coordinate WASH-related activities cutting across the three sectors (MoWR *et al.*, 2006a). The MoU included developing a joint monitoring system on WASH-related results, representing one of the nine sector undertakings listed in Figure 3.3.

In 2005, another sector undertaking, the streamlining of sector financing, was strongly influenced by events outside the sector. At the time, various donors were considering aligning their finance mechanisms with those of the Ethiopian government by directly supporting the federal budget. However, as discussed in Chapter 2, in the aftermath of the 2005 general elections, the Ethiopian government clamped down heavily on opposition and demonstrators

³⁸ More recently, a working group on watershed management was established to develop joint monitoring approaches (Interview #223).

(Abbink, 2006a). These events led several donors to reconsider their move towards direct budget support. Instead, various mechanisms were created to support the delivery of basic services via block grants directly allocated to *woredas*, Ethiopia's local governments. These include the PBS and the PSNP, both programmes that include rural water supply.³⁹ This move had a bearing on the rural water supply sub-sector in that it led to an additional financing channel at the *woreda* level that bypassed the MoWR. It contributed to the complexity of financing arrangements in the rural water sector thereby weakening the potential link between PM results and budget allocations in the sector, an aspect I discuss in detail in Chapter 8.

Meanwhile, the sector reform process initiated in 2006 halted, it stopped short of establishing WASH coordination bodies and a unified way of managing the sector (MoWE, 2011). The WB-initiated WASH Programme, designed as a blueprint for a future unified approach for implementing rural and urban water supply infrastructure, I described in Chapter 2, stalled in 2007 *inter alia* because the sector could not cope with its complex financial reporting and procurement requirements. Nevertheless, major new investments in the sector from the AfDB and DFID broadly followed the WB's Programme Implementation Manual under an emerging 'WASH Programme' to harmonise donor approaches.⁴⁰

One practical change in the monitoring of donor activities related to rural water supply consists of a format that summarises sector donor activities in a single report format as opposed to the previously separate reports to the MoWR. Government sector offices, for their part, continue to report separately, to their respective line ministries, following their existing sector monitoring procedures. In the meantime, efforts continued to develop a joint WASH monitoring framework. In 2008, a joint Monitoring and Evaluation Manual was developed

³⁹ As discussed in Chapter 2, the PSNP (Productive Safety Net Programme) and the PBS (Protection of Basic Services) are multi-sector programmes, aimed respectively at improving food security and productivity and at expanding access and improving the quality of basic services.

⁴⁰ Since my field work period ended in October 2010, there have been further revisions to the Project Implementation Manual, leading to greater alignment with Ethiopian financial systems.

(MoWR, 2008c). While the health sector was seen as already having a strong monitoring framework for sanitation and hygiene, the water sector generally was perceived as having a poor monitoring system in place. Rural water supply figures in particular were hotly debated among sector stakeholders.⁴¹ At the centre of the contention over rural water access is the aforementioned stark contrast between the MoWR's reports suggesting a strong increase in rural water access, and the internationally reported JMP figures, which are consistently and significantly lower. Since 2009, a National WASH Inventory has become the focus of efforts related to monitoring of rural water supply. According to a senior sector official (Interview #206), a key intention of the inventory is to get all sector stakeholders "speak the same language" when it comes to water access. Since data collection for the National WASH Inventory started after my field work, it does not constitute part of this thesis. Some of the challenges and opportunities related to this process have been summarised elsewhere (Butterworth *et al.*, 2010, Welle *et al.*, 2012, Butterworth *et al.*, 2013).

3.4 Summary of the discussion

To summarise, PM forms part of RBM, a management strategy that focuses on performance improvement. Central to this management strategy is the presumption of a single-stranded results chain that links objectives with the results related to a particular intervention. The role of PM in RBM is as a feedback loop between results and objectives, to inform decisions that will improve the performance of the intervention in question. RBM and, as part of that, PM, originate from business management models developed during the 20th century in the private sector. Since the 1980s, RBM has spread to the management of public sectors in rich and poor

⁴¹ However, progress on access to sanitation facilities is also contested. While the Ministry of Health reports that 56% of households had access to sanitation facilities in 2010, their use is estimated to be much lower, at 20%. The JMP, meanwhile, reports 47% access to sanitation facilities for shared and basic facilities in 2010 (Newborne and Liisanantti, forthcoming). Furthermore, access to sanitation facilities does not, in itself, indicate better hygiene practices, which are needed to bring about health benefits (Mehta and Bongartz, 2009).

countries alike. A central rationale for introducing RBM in the public sector is the premise that this management strategy increases accountability of public sector management. However, evidence from the application of RBM in the public sectors of different countries highlights important problems with this management model. On the one hand, there is evidence of RBM leading to 'perverse incentives' and 'gaming behaviour' thereby at best refuting its original goal and at worst causing harm as illustrated by the case of the 'body count' during the Vietnam War. On the other hand, there is substantial evidence that the implementation of RBM in the public sector remains piecemeal and that full application of this management strategy may be unrealistic, particularly in public policy areas that are politically important or sensitive.

This criticism notwithstanding, PM, as a central part of RBM, has been firmly established in development cooperation under the aid effectiveness agenda. The RBM philosophy is reflected in the aid effectiveness Principle No. 4: 'managing for development results'. Global development results have been set by the MDGs, of which target 7c relates to water supply and sanitation. Global PM of MDG 7c is carried out by the JMP, and sector government progress towards managing for results is reported in UN-Water's GLAAS report. At country level, in Ethiopia, reform efforts towards increasing aid effectiveness started in 2005 with the establishment of a multi-stakeholder dialogue on WASH. Up to 2010, this dialogue had led to increased harmonisation among donor programmes, but it is far from being aligned with the sector's public finance and public management systems. In terms of monitoring rural water supply, reform efforts have focused on developing a unified WASH monitoring system for the sector. At the time of my fieldwork, this system was not operational. However, government, donors and NGOs alike all monitor development results.

To reiterate the important position of PM in the water sector, and to demonstrate that the model's inherent logic is indeed reproduced among sector stakeholders, I provide the

following quotes. UN-Water, the agency that oversees international monitoring of water supply by the JMP, states the purpose of monitoring as “to track progress against given objectives” and “to inform decisions, focus and orient political and policy reforms, and to channel financial resources in the most effective way” (UN Water, 2006: 9).

GLAAS, UN-Water’s assessment tool to trace policy and institutional reforms in the water sector, comments in 2012 (WHO, 2012b: 13):

“Most countries have established national sector coordination and planning processes, but many also report having inadequate information and data for effective investment planning. Only one half of responding countries respond that their planning processes are based on annual or biennial reviews, and even fewer countries are in a position to perform their planning based on reliable data from national information systems”

The Ethiopian MoWE states in a recent presentation to sector partners on preliminary results of the National WASH Inventory (MoWE, 2012a):

The need to strengthen Monitoring and Evaluation (M&E) in the WASH sector is increasingly acknowledged by both Government and development partners []. Moreover, Government is committed to accurately measure progress towards the achievement of UAP and MDG targets with regard to WSS [Water Supply and Sanitation] – for better quality plan and allocation of resources to accelerate progress.

While the first quote reaffirms the linear causality inherent in the single-stranded PM results chain, the second and third are illustrations of a global effort to measure progress towards implementing the model. The second quote also documents the difficulties countries currently face to fulfil aid effectiveness requirements in the water sector. When I speak of this logic inherent in PM as an ‘established belief’ or a ‘commonly held assumption’ in this thesis, I mean this in discursive terms as used by Maarten Hajer who refers to “routinised forms of discourse” (1995: 57) to explain “why a particular understanding of the environmental problem at some point gains dominance and is seen as authoritative” (Hajer, 1995: 44). In line with Hajer, I interpret the dominant reference to the single-stranded feed-back loop of PM in policy documents, sector reviews and among sector actors as the “disciplinary force of discursive practices” (Hajer, 1995: 57) that makes actors adhere to a particular storyline or narrative. At

the same time, in their discursive engagement with the concept of PM, actors can change their positions, for example, recognising the shortcomings of PM in private conversations, a point I reflect on in Chapter 5 which sets out my methodology.

In subsequent chapters, I investigate the contradiction between the way PM is commonly presented – as an objective and linear process to improve performance - and the more messy reality that emerges from the global and national monitoring of rural water access in Ethiopia.

The central question that guides my investigation is:

What role does performance monitoring play in shaping policy decisions on rural water access in Ethiopia?

In Chapter 4 I explore the theoretical insights that inform this investigation.

4 Politics of knowledge production underlying performance monitoring

Chapter outline

In this chapter, I explain the theoretical insights that inform my investigation of PM. Section 4.1 starts by positioning my analysis within the body of literature that critiques PM primarily from the perspective of the politics of knowledge production. I then conceptualise PM as one particular form of ‘social appraisal’, the process by which society informs itself of the implications of alternative policies. Section 4.2 discusses the notion of framing, which brings the political dynamics in appraisals to the centre of analysis. I explain how power can be exercised through actors’ framings, which shape the inputs into knowledge production processes. Section 4.3 discusses the notion of ‘performing monitoring’. Based on the idea that actors’ rationales may differ from officially stated appraisal objectives, PM becomes an act of stage management by the actors who stage their performance by promoting their interpretation of the truth. Viewed from this perspective, PM may end up justifying rather than contributing to the forming of decisions and wider social commitments. In addition, monitoring results and associated decisions may result from different appraisal processes of various degrees of formality as well as from ontological aspects. The chapter concludes in section 4.4, by presenting the research questions informed by the preceding theoretical discussion.

4.1 Examining the politics of knowledge production

Chapter 3 introduced the linear model of PM; I explained that a central argument for its increased importance in the public sector was improving accountability of public services for citizens. The examples I gave of PM introduced into development cooperation showed that, in reality, its implementation remains piecemeal. Also, various experiences of implementing PM in the public sector have demonstrated issues such as ‘perverse incentives’ and ‘gaming

behaviour' to comply with targets. These examples indicate that PM, implemented in the public sector, cannot easily be described as either uniquely objective or linear. The discussion in Chapter 4 focuses on scholars who fundamentally criticise the notion of performance, by highlighting the politics and power relations inherent in the underlying process of knowledge production. This critique is my point of departure for the theoretical insights that guide the analysis of PM in this thesis.

4.1.1 Critiquing performance from the perspective of the politics of knowledge production

Michael Power, a Professor of Accounting, critiques auditing practice, a branch of performance related to financial systems and accounting that I outlined in Chapter 3, saying that auditing "techniques and procedures are perceived to 'work' because they have become institutionally acceptable ways of gathering and processing evidence" (Power, 1997: 87-88). In his view, performance measurement is not, itself, uniquely objective, but rather represents a set of routines and practices that have become institutionalised as a standard in the profession of auditing. Michael Power (1997: 115) also suggests that "performance is a contestable notion", a phrase that he uses to refer to the contestation over outputs and outcomes - both seen as constituting performance. This point emerges clearly in the literature of PM, and in the realities of monitoring access to water supply, namely the contestation between the MoWR and the JMP over access to water in Ethiopia, discussed in Chapter 3. In Michael Power's view, the contestation over outputs and outcomes shows that what counts as performance is ultimately a question of political power. Power is embedded in a hierarchy of measures that characterise performance. This means that auditable performance becomes an end in itself, a game around defining indicators, with the result that "auditing constructs concepts of performance in its own image" (Power, 1997: 119). Rather than increasing transparency and accountability, as suggested by the linear model underlying performance, in Michael Power's view, auditing represents a new form of "image management" (Power, 1997: 143).

Michael Power's analysis is supported by the work of Theodore M. Porter, a Professor in the History of Science, who examines statistical thinking. Porter challenges the notion of a uniquely objective measurement in statistics. According to him, quantification can be seen as a "technology of distance" (Porter, 1995: ix), by which knowledge is constructed as seemingly independent of personal judgement. He argues that there is an assumed idea behind quantification of a "mechanical objectivity" (Porter, 1995: 7). The notion of 'mechanical objectivity' implies that knowledge is based on the application of "sanctioned methods or perhaps the mythical, unitary 'scientific method'" which produce "presumably neutral facts" (Porter, 1995: 7). With his reference to 'scientific method', Porter picks up on an assumption that is firmly embedded in the concept of PM, which I discussed in Chapter 3. The notion of 'scientific method', introduced to standardise and maximise the performance of working procedures to produce goods, reinforces the idea that PM follows a linear model. The appeal of abstract numbers in that context is that they appear fair and impersonal, which lends them an air of 'objectivity', a point also discussed by Alain Desrosières (1998). Porter relates this apparent air of 'objectivity' suggested by statistical numbers to bureaucratic actors that lack a clear democratic mandate. I argue that this can be extended to PM in the public (and possibly private) sector of any country. Quantification helps the bureaucrats because it provides a subtle way to take decisions. In the words of Porter, the objectivity resulting from quantification "lends authority to officials" (Porter, 1995: 8). One might add that the notion of objectivity can serve to justify the decisions that have been taken, for different reasons, a point I discuss in Section 4.3.

Furthermore, 'objectivity' can also be seen as achieving a political character in the process of social validation. According to Porter, (Porter, 1995: 33), in this process, power is exercised to validate specific measurements among a range of potentially valid measures that would yield different solutions. Michael Power argues similarly in his comment that, in auditing, some measurements become elevated over others. His argument resonates with those of Michel

Callon and Fabian Muniesa, who highlight that in economic markets, calculations are framed by the drawing of a boundary between those goods that are taken into consideration and those that are left out (Callon and Muniesa, 2005: 1235). Donald Mackenzie (2008) makes the same point in relation to calculations in financial markets. The objectivity inherent in the specific measurement represents ‘impersonality’, which, in reality, is often “conflated with objectivity as truth” (Porter, 1995: 74).

The idea of ‘conflating objectivity as truth’ echoes reflections made by Jean-Francois Lyotard (1996) on the postmodern condition. Lyotard argues that performance maximisation may be used as a way to legitimise decisions. He holds that, in performance maximisation, truth becomes replaced by specific methods of performance resulting in what he calls ‘performativity’. Mackenzie (2008), who does not make reference to Lyotard, proposes the idea of “Barnesian performativity” as a process where economics, by applying economic models, makes markets change in accordance with these models. Viewed from this angle of knowledge production, ‘performativity’ is the process of creating an image that then becomes the reality, an observation that draws on Callon who holds that “economics, in the broad sense of the term, shapes and formats the economy rather than observing how it functions” (Callon 1998: 2 in: MacKenzie, 2008: 16). In that sense, PM can be interpreted as creating an image of the world that is compliant with PM parameters.

These knowledge-power dynamics are recognised also in the STEPS Centre’s Working Paper 6: *“Liquid Dynamics: challenges for sustainability in water and sanitation”*, which holds that these dynamics “shape the interventions made into hydrological cycles, their material effects, and the consequent forms those cycles take. Social processes affecting framing, in this way, can have real hydrological impacts” (Mehta *et al.*, 2007: 17).

The authors referred to above criticise key issues of the linear model of PM I identified in Chapter 3: the uniquely objective character of PM represented in a single stranded results

chain between setting objectives, monitoring results and taking action to keep the particular project or programme on course towards the expected results. Three points emerge from the critiques presented above, which guide the development of my framework of analysis:

First, the authors hold that setting performance objectives, while presented as neutral, in fact, is a political process. Importantly, their critique shows that performance ultimately may replace truth by defining the objective of appraisal through the appraisal method applied. The result is that PM creates an image of reality that mirrors a particular point of view. One of my entry points to investigating the uniquely objective character of PM is to compare different actors' framings of access to rural water supply. The preceding chapters have provided some insights on this – such as the contrast between Meselich's experience and the neutral access figure, and the difference between measuring access to a technology designed for domestic purposes and the dynamic nature of peoples' water needs depending on their livelihood practices, patterns of water availability, wealth and other factors.

Second, the above scholars make reference to specific political and power dynamics inherent in the process of PM. For example, Callon and Muniesa speak of drawing boundaries between those aspects that are considered in an analysis and those that are left out; Michael Power refers to the political power dynamics involved in creating a hierarchy of performance measures; and Porter highlights how a mechanical objectivity emerges from the sanctioning of methods that lead to seemingly neutral results. This area of criticism points to the need to examine the political and power dynamics inherent in PM processes, with a particular attention to the ways in which powerful actors determine methods and other appraisal parameters to influence PM processes and results. In this thesis, I investigate this topic by analysing the power dynamics underlying regular reporting processes, and investigating a sub-process of a scheme inventory.

Third, the authors draw attention to the legitimising character of PM. Porter argues that the objectivity of numbers lends authority to bureaucrats. Lyotard and Power highlight how performance replaces truth, or creates a truth that mirrors a particular viewpoint. In so doing, performance helps to construct a seeming rationality behind decisions that may have been taken for other reasons such as privately favoured ends, contextual constraints or other. PM can help to justify decisions and, thereby, lend legitimacy to the actors involved. An important source of legitimacy in public sector PM is the apparent accountability it provides for stakeholders. An entry point to analysing this aspect is a look at the wider social dynamics that come into play in policy processes, and investigation of the role of PM in that process. In this thesis, this is accomplished through an examination of budget allocations and strategic planning for rural water supply at regional and *woreda* level, and analysis of the factors underlying the decision to repair a deep well in my case study location.

In the remainder of this chapter, I develop an analytical framework that allows me to incorporate the above insights into my specific analysis of PM of rural water access in Ethiopia.

4.1.2 Investigating the social dynamics in appraisals

In my investigation of PM, the interest is in an analytical approach that conceptualises PM as a means of knowledge production. I am interested also in a framework of analysis that specifically addresses the political and power dynamics involved in appraisal processes. The STEPS Centre's approach to 'social appraisal' fulfils this role. In their Working Paper 3 *"Empowering Designs: towards more progressive appraisal of sustainability"* the authors define 'social appraisal' as "the collection of social processes through which knowledges are gathered and produced in order to inform decision making and wider institutional commitments" (Stirling *et al.*, 2007: 1).

As the adjective ‘social’ indicates, the STEPS Centre’s definition of appraisal refers to the broader social settings in which appraisal processes take place.⁴² The authors’ use of the adjective ‘social’ makes reference to the wider systems in which appraisal is embedded, and the institutional and governance processes that interact with appraisal (Stirling *et al.*, 2007: *ibid*). By making social appraisal the subject of analysis, the politics of knowledge production and use become the centre of analysis. The STEPS Centre’s understanding of social appraisal allows me to focus my analysis not just on specific appraisal methods but also on the wider institutional and governance settings that constitute social appraisal. It is in this context that both specific appraisal methods and their wider context form part of the focus of my analysis. When examining different appraisal designs, I pay particular attention to how power relations bear on appraisal exercises. Adrian Smith and Andrew Stirling, two of the authors of the STEPS Centre’s Working Paper 3, have elaborated their understanding of ‘social appraisal’. Below, I make use of this more detailed explanation and discuss their understanding of ‘social appraisal’.

Smith and Stirling (2007) developed a specific understanding related to ‘social appraisal’ as part of their broader goal to better understand the dynamics of governance in relation with socio-technological systems. To do so, the authors make a heuristic distinction between appraisal and commitments (Smith and Stirling, 2007: 352). Social appraisal is about “ways of understanding” or “ways of knowing” in relation with socio-technical systems, while social commitment is about “ways of being”, the forming of social choice (Smith and Stirling, 2007: 354). In practice, appraisal and commitments are interlinked; for example, elements along the policy process such as problem identification, agenda setting, policy implementation and evaluation are subject to both appraisal and commitments. The authors distinguish analytically

⁴² An example of a definition of social appraisal, where the adjective ‘social’ as the object of appraisal is understood according to its definition in social psychology that social appraisal refers to the cognitive process of individual self-evaluation with regard to social relationships (Scherer *et al.*, 2001, Urda and Loch, 2005). Another example, from the field of business and finance, defines social appraisal as an extension of cost-benefit analysis (Pearce and Nash, 1981).

between the two to bring “the contrast between managerial and political perspectives” (Smith and Stirling, 2007: 354) to the centre of attention. This endeavour is also at the heart of my analysis, namely to draw out the difference between the managerial goals related to PM and the political realities to which PM is subject.

Commitment relates to the material interests of actors and to the ways they engage in the reproduction of specific configurations of a socio-technical system. Discursive commitments among actors facilitate material commitments. There is an interpretative flexibility in discursive commitments, which allows for different formations of groups of actors. An example of a discursive commitment is the assertion of a position by a person with political influence. However, when the same person debates the merits and shortcomings of a socio-technical system, the authors (Smith and Stirling, 2007: 355) interpret this as epistemic, as a form of appraisal. Material and discursive commitments are complemented by institutional factors supporting a particular socio-technical system; these latter factors are seen to bias a system against radical change. Next, I explain the process of appraisal in more detail.

Appraisal relates to ‘ways of knowing’, the ways in which knowledge is produced through different practices, approaches and tools. Smith and Stirling (2007: 356) highlight two distinctions that apply to any type of appraisal: the breadth of inputs, which may be broad or narrow, and the way in which outputs of social appraisal “‘open up’ or ‘close down’ the formation of discursive and material commitments in wider governance”. Importantly, the notion of broad and narrow inputs and opening up and closing down of outputs cuts across all types of appraisal according to Smith and Stirling. They equally affect expert-analytic types of appraisals and deliberative-participatory ones.

The breadth of appraisal inputs relates to the extent to which different causal relationships are considered. Another dimension of breadth is the variety of perspectives, e.g. professional, disciplinary, or other, which contribute to the production of knowledge. Independent of the

character of the inputs into appraisal, the outputs of appraisal may serve to open up or close down specific commitments. Opening up of appraisal results may take on the form of providing a new perspective on an existing socio-technical system; closing down refers to appraisal results that suggest a particular course of action (Smith and Stirling, 2007: 357). Closing down occurs repeatedly in appraisal processes, for example, through the choices of committee members, of a particular questionnaire, or the choice of a particular data analysis method. Opening up in the course of appraisal, in contrast, relates to taking in new insights to inform a given problem, which opens the way to greater reflexivity in governance. Smith and Stirling's notion of closing down is consistent with the establishment of boundaries in market calculation processes, discussed by Callon and Muniesa (2005), and highlighted in Section 4.1.

According to the above description of social appraisal, each step or element in an appraisal exercise is interlinked with social commitment. For example, a monitoring exercise involves many steps from setting objectives, choosing a strategy, developing questions, choosing monitoring agents, implementing the monitoring exercise, analysing the data to presenting results. In each step, the actors with existing social commitments or material interests, and who are involved in discursive practices and constrained by existing structures, will imprint their interpretations and preferences. It is here that framing and power become important in social appraisal. This is the topic of section 4.2.

Appraisal and commitment are two sides of the same coin, but are separated here for analytical purposes (Smith and Stirling, 2007: 354). Their separation allows me to analyse them individually in relation to the object of appraisal, access to rural water supply in Ethiopia. Their analysis reveals that a number of appraisal exercises can occur in parallel. The formal PM process, referred to here as PM, which tends to be at the centre of attention, may represent only the tip of an iceberg of other, less formal, appraisal exercises. In fact, in relation to access to rural water supply in Ethiopia, less formal appraisal results, institutional factors and material

conditions may have a stronger influence on social commitment than formal appraisal results. An indication of this is that the results of the National WASH Inventory, conducted in 2010-11, were not publicly available at the time of the final writing of this thesis in December 2012, the long time lag making these results less relevant for strategic planning. I discuss this possibility further in Section 4.3 below.

As highlighted by Porter, the same phenomenon can be appraised in different ways, with contrasting results. Throughout an appraisal process, the actors continuously make choices that impact on the appraisal. This basic observation suggests that social appraisals are subject to power. Different agents, depending on their relative power positions, are able to influence appraisals, based on their particular interests and constraints. By so doing, they make social commitments that have the effect of elevating some appraisal areas. According to Stirling (2005, 2008), one way that agents exercise power is by framing the inputs into appraisals as well as their outputs. In Section 4.2 I present and discuss different approaches to framing and explain the exercise of power through framing in social appraisal.

4.2 Framing and power in social appraisal

The term 'framing' is popular in several different areas of the social science literature. While some authors use the term simply as a metaphor, others elaborate framing as a substantive concept in order to help to analyse how societies generate meaning (Fisher, 1997). As a means to interpret the social world, the concept of framing has found an entry into a wide variety of disciplines including sociology (Goffman, 1974, Snow *et al.*, 1986, Benford and Snow, 2000), linguistics (Lakoff, 2003), communications (Entman, 1993), political science (Schön and Rein, 1994, Campbell, 1998, Surel, 2000, Saarikoski, 2006), geography (Mansfield and Haas, 2006), development studies (Fairhead and Leach, 1998), and science and technology studies (Levidow *et al.*, 1997, Jasanoff, 2005, Millstone, 2007).

Framing also features prominently in the work of the STEPS Centre, i.e. in the research centre's core working papers on governance, systems, and designs (Leach *et al.*, 2007b, Scoones, 2007, Stirling *et al.*, 2007) and in the working paper outlining STEPS' water and sanitation domain (Mehta *et al.*, 2007). Rather than reviewing the diverse contributions among the social sciences on the concept of framing, I limit my discussion below to what I see as the most substantial and most widely referenced contribution to framing, the work on framing by Rein and Schön. I compare their approach to framing with the STEPS Centre's understanding of the concept.

4.2.1 Interpretation of framing by Rein and Schön

In the field of Interpretive Policy Analysis, the authors Martin Rein and Donald Schön are well known for their work on framing as a way to analyse complex policy controversies (1993, 1994, 1996, Rein, 2006). According to Rein and Schön (1996: 89), frames are

strong and generic narratives that guide both analysis and action in practical situations. Such narratives are diagnostic / prescriptive stories that tell, within a given issue terrain, what needs fixing and how it might be fixed. ... These generic story lines give coherence to the analysis of issues in a policy domain, often through reliance on a unifying metaphor which enables the frame holder to make a graceful normative leap from is to ought.

In their definition, Rein and Schön conceptualise framing as a story line, which suggests the discursive and dynamic nature of framing. In that perspective, individuals can adopt different frames depending on the context in which they find themselves, and depending on the particular interests and constraints they experience in that situation. The notion that individuals can hold different framings emerges in my findings on actors' framing of access to rural water supply.

The above definition suggests also that framing, as a narrative, establishes a specific cause-effect relationship among different possible explanations of cause and effect. Rein and Schön hold that framing is a normative act, allowing individual or institutional frame holders to employ 'generic' and 'unifying' metaphors to imply a particular cause of action. In their book,

Schön and Rein (1994) give the example of two different portrayals of urban housing in Boston. One story presents the complex problems related to urban housing as a cycle of decay and disease that is in the need of renewal; the alternative story is of urban housing as constituted by social interaction and informal networks of natural communities that need to be preserved (Schön and Rein, 1994: 24-27). The authors' interpretation of a storyline as a framing that establishes a particular cause-effect relation draws attention to the possibility that PM is not a neutral, linear process of relating causes to effects. Instead, this process can be seen as mediated by actors' framings as exhibited in Schön and Rein's urban housing example.

Furthermore, Schön and Rein distinguish between rhetorical and action frames. Rhetorical frames are frames that are used in policy debates to persuade groups of people or justify actions, while action frames inform policy practice (Schön and Rein, 1994: 32). Action frames may be in line with or may contradict the rhetorical frames. While Schön and Rein identify only one type of rhetorical frame, they differentiate between three different levels of action frames: policy frames, institutional action frames, and meta-cultural frames.⁴³ In their distinction between rhetorical and action frames, they draw attention to the fact that actors use rhetorical framings as self-justification, and that their action frames may contradict their rhetorical frames. The authors exemplify this dynamic with the rhetorical frame of the 'safety net' that dominated discussions of welfare policy in the Reagan and Bush administrations. They hold that the rhetorical frame of the 'safety net' was contradicted by practical changes mainly aimed at excluding 'welfare cheaters'. Schön and Rein's observation that frames may be used to justify commitments, such as decisions or actions, resonates with the critique on performance presented above. According to Porter, abstract numbers can be seen as a way of

⁴³ A policy frame is "the frame an institutional actor uses to construct the problem of a specific policy situation" (Schön and Rein, 1994: 33). In comparison, institutional action frames are more generic according to Schön and Rein. They are the frames held by an institution, and from which institutional actors derive more specific policy frames. According to Schön and Rein (1994: 33), institutional action frames are "complex and hybrid in nature" because they see them as an amalgamation of overlapping frames held by different individuals in an institution such as the Boston Redevelopment Authority. Meta-cultural frames are much more general, namely "broad, culturally shared systems of belief" and they cut across rhetorical and action frames (Schön and Rein, 1994: 33-34).

making a decision without seeming to do so. This ends up legitimising bureaucrats. I discuss decision justification in more detail in Section 4.3.

An issue that arises from Schön and Rein's approach to frame analysis is related to their focus on a retrospective study of texts emanating from speeches, debates, laws, regulations and routines (Schön and Rein, 1994: 34). This focus allows the authors only to study dominant framings that have been documented in one of the above ways. Subordinate framings, which have not been documented, may be lost, and controversies over framings may never be detected as long as the framing only of the hegemonic actor is documented. This is an important omission in studies of the exercise of power through framing. Below, I discuss the STEPS Centre's interpretation of framing, specifically how the exercise of power through framing in social appraisal is explained.

4.2.2 STEPS interpretation of framing

Stirling (2005, 2008) and Stirling, Leach et al. (2007) discuss framing in the context of their understanding of 'social appraisal', which I introduced in Section 4.1.2. If appraisals are conceptualised as encompassing any situation that involves a process of evaluation, whether formal or informal, social appraisal becomes a very widely applicable concept. It can be understood also to include the situations of policy controversies discussed by Rein and Schön, because it involves processes of knowledge production and use. According to Stirling, Leach et al. (2007: 16) framing

refers to the particular contextual assumptions, methodological variables, procedural attributes or interpretative issues that different groups might bring to a problem, shaping how it is bounded and constituted, and the relative salience of different factors. Framing effects together condition the ways in which even the most finely specified method is implemented in practice, and strongly influence the patterning of results.

The STEPS Centre's definition of framing is consistent with Rein and Schön's definition of prescriptive story lines that tell about what needs fixing and how it might be fixed. The STEPS Centre refers to this as the act of 'bounding' and 'shaping' a problem, and giving more weight

to some factors in preference to others in this process. In comparison to Rein and Schön, who focus on 'generic' and 'unifying metaphors' in the action of framing, the STEPS definition emphasises method. Although method and metaphor might at first sight appear rather different features, I argue that they have some commonalities. Rein and Schön argue that metaphors function to support a particular story line; they express the essence of the story, for example, describing a crisis in urban housing as a disease. Stirling et al.'s reference to methods also fulfils the function of telling a story in a particular way, based on the method used to appraise a particular problem. Methods, therefore, can be seen as constitutive of a story.

The constitutive effect of methods is inherent Stirling et al.'s definition of framing, which distinguishes three aspects: framing of the problem; framing of the appraisal; and framing of the appraisal results. In theory, therefore, the method might inform the framing of the problem, rather than vice versa. This suggests a circularity between the framing of the problem and its assessment. In order to define a problem people measure it. Framing can be constituted by methods and, at the same time, be used to justify those methods. This understanding of framing in social appraisal allows me to analyse the process of PM as a form of 'image management' put forward for auditing by Michael Power.

Unlike Rein and Schön, Stirling and his colleagues do not distinguish between different types and levels of framing. Instead, they distinguish between different aspects of framing directed at the problem or object of appraisal, the inputs into appraisal and appraisal outputs, as presented in Section 4.1. This returns me to Smith and Stirling's earlier discussion on social appraisal and to the exercise of power through framing in this context.

4.2.3 The exercise of power through framing in social appraisal

The concept of power has been studied by many scholars, all of whom draw attention to the different ways in which power is exercised. Power can be exercised directly, for example in a Machiavellian sense through coercion and force (Nederman, 2005), or in the sense of Max

Weber, by enacting authority through domination (Gingrich, 1999), or as viewed by Robert Dahl (1957: 203) in relation to the political democratic system - that A “can get B to do something that B would not otherwise do”. Others conceptualise the exercise of power in a more indirect and distributed form in society. For example, Stephen Lukes highlights that the exercise of power can also be invisible, inherent in non-decisions, or even in the shaping of peoples’ preferences (Lukes, 1974). Antonio Gramsci’s contribution relates to an understanding that power is exercised not only through coercion but also indirectly through hegemony, namely by forging passive consent among those who are ruled (Femia, 1981), while Michel Foucault’s work highlights the exercise of power through knowledge inherent in dominant discourses (Gutting, 2012). Foucault’s conceptualisation of knowledge and power is central to the STEPS Centre’s work (Leach *et al.*, 2007a) and also informs the Centre’s understanding of exercise of power through framing.

In appraisal exercises, power may be exerted deliberately and openly, or indirectly, and it can lead to intended or unintended consequences. For example, a powerful actor can exercise power within an appraisal exercise with the normative intention to empower marginalised voices. Depending on the interests of the individuals involved in, or affected by, the appraisal, including the actor looking on, the use of power by this powerful actor may be seen as good or bad. The role of power in appraisal, therefore, cannot be seen as inherently positive or negative or unidirectional, but it is important to acknowledge that power necessarily plays a role in appraisals (Stirling, 2008: 274). In concrete instances, however, power works in a specific way, benefitting some and disadvantaging others.

One way in which actors can employ power is through framing, and this is possible in any part of an appraisal exercise. Framing has a bearing on the inputs into any form of appraisal exercise whether participatory or expert-analytic in nature. Framing occurs in the design, implementation and analysis of appraisal through, for instance, choosing the methods for its

design, the way the enquiries are carried out, or by selecting among the data collected in the analysis. Independent of the framing of inputs, framing also influences the outputs of appraisals, which often are regarded as no longer part of the appraisal exercise: for example, the prioritising of research agendas in an organisation, or the prioritisation of research results that are communicated to a wider audience (Stirling, 2008: 275).

In this conceptualisation, power is always situated. There is no one actor whose framing is dominant in all situations; it is dependent on the particular context. For example, the MoWR is able to exercise its power by framing the official calculation of access to water supply within the sector, but this power diminishes at the international level. Also, subordinate actors have agency. There may be situations where they are able to put forward their alternative interpretation of access to rural water, as I show in Chapter 7 where I investigate appraisal dynamics.

Stirling (2008: 275) notes also that the exercise of power via framing is often tacit, or may even be intentionally covert and, therefore, may not be recognised. For example, participatory appraisals are generally regarded as a good thing from a democratic point of view, even though they can end up as a rubber-stamping instead of an expression of the views of marginalised people (see, for instance, Mosse, 2004). This indirect exercise of power is central to the aspect of social commitment in appraisals. It is here that actors, based on their rationales, can shape appraisal exercises and their results, to conform to their preferences rather than the formal objective of the appraisal. In Section 4.3, I explain these dynamics in more detail. In particular, I elaborate the idea of decision justification and ‘performativity’ to explain what I the title of this thesis refers to: the difference between ‘monitoring performance’ and ‘performing monitoring’. I discuss intentionality in social appraisal, which, importantly, may be different from the official appraisal objective, and which is key to answering my main research question: what role does performance monitoring play in shaping

decisions on rural water access in Ethiopia? Beforehand, I briefly discuss different views of the policy making model that PM is subject to. This literature is useful because it assists me in exploring in more detail various factors that explain why the rational, linear view of PM prevails despite the overwhelming evidence of its limitations discussed in Chapter 3.

4.3 Monitoring performance or performing monitoring?

4.3.1 The rational versus the incrementalist perspective on policy

Policy analysts invoke different policy models to interpret political processes (Jenkins, 1978).

Two prominent views on the policy making model are the rational and the incrementalist perspective (Hogwood and Gunn, 1984, Hill, 1993, Hill, 1997). The rational model of decision making, first put forward by Herbert A. Simon, takes on an “idealised” (Hill, 1997: 101) view of the policy process. This view assumes decisions are taken based on a number of rational steps where different options are weighed up. The incrementalist view criticises this model and holds that, in reality, decision making in public administrations follows the model of “muddling through” (Lindblom, 1959). According to the incrementalist view, decisions are the result of a continuous adjustment based on the accommodation between different interests (Hill, 1997: 103). Some authors have sought to accommodate the two positions by distinguishing between fundamental and incremental decisions (Hill, 1997). Others have characterised the debate between the rational and incrementalist model as “artificial” (Smith and May, 1998: 172) because it confuses the relationship between realist and normative frameworks of analysis. The RBM model and PM in relation to aid effectiveness I discussed in Chapter 3, follow the rational policy model. In this thesis, I critically examine the role of this model in taking policy decisions on rural water access. As part of this, I bring together a range of factors identified in the literature on the politics of the policy process, which help to explain the continued dominance of the rational policy model.

4.3.2 Why the rational policy model continues to prevail in policy discourse

In their examination of the policy cycle, many authors who share an incrementalist perspective make reference to the political dynamics inherent in this process. Individual contributions highlight a range of factors that bear on the policy process. These different perspectives, discussed here below, help to identify different reasons why the rational, linear view of PM continues to persist in policy practice cycles as demonstrated in Chapter 3.

Merilee Grindle and John Thomas (1991) highlight how the political economy, namely the values, perceptions and experiences of policy elites together with the specific historic, institutional and political context, determine what they call a relative 'policy space' for reform. Specifically, they highlight the importance of perceptions of crisis that provide windows of opportunity to successfully implement a reform effort. The economist Paul David (1985), and others, show that economic changes do not occur solely through rational choice, but are influenced also by phenomena, such as 'path dependency', that can lock practices into a particular path.

Other authors mobilise the nexus between knowledge and power to explain policy change. James Keeley and Ian Scoones (2003c: 39) explore different analytical lenses that bring a continuous "interplay of discourse, political interests and the agency of multiple actors" to the foreground of analysis. The authors also explicitly note the inertia of some policy processes. In their study of knowledge, power and politics of environmental policy making in Ethiopia, they find that, in some instances, even when criticised, certain ways of working continue to 'stick' because of specific formations of actor network coalitions and circumstances. (Keeley and Scoones, 2000, 2003a).

Maarten Hajer (1995), in his argumentative approach, highlights the "constitutive role of discourse in political processes" (Hajer, 1995: 58) in which storylines "provide actors with a set

of symbolic references that support a common understanding” (1995: 62) used as political devices to achieve discursive closure.

The persistence of the rational policy model, here the rational, linear view of PM, can thus be explained by a combination of factors. These include its embeddedness in particular institutional structures, bureaucracies and actor network groups around the aid effectiveness agenda in development cooperation; another factor relates to path dependency in the way that the rational model has become part of people’s everyday practices around the project implementation and monitoring cycle of delivering rural water supply infrastructure that becomes perpetuated and reinforced over time; a further explanation is that the rational policy model of PM suits dominant political interests in donor-recipient policy circles in that it provides a coherent storyline of bureaucratic accountability, averting blame and attributing responsibility among actors. These and other factors will become apparent in the three empirical chapters of my thesis.

Many authors who criticise the rational perspective on policy point out the dilemma that actors who are locked into policy processes need to be seen as acting rationally and as solving problems (Hill, 1997). As a result, the rational policy making model is used “as gloss for a range of practices” (Smith and May, 1998: 172) and in order to legitimise and mobilise political support (Mosse *et al.*, 1998, Mosse, 2004). In other words, it may serve to justify decisions (Collingridge, 1980, Stirling, 2008), as expressed in the STEPS Centre’s approach to social appraisal. An example for this in RBM is the symbolic value of management control systems that reassure a concerned public that government employees are accountable even though this might not be the case (Lipsky, 1980: 164). Next, I elaborate further on actors’ rationales in social appraisal processes and how these may lead actors to justify decisions in line with the rational policy model.

4.3.3 Rationales in social appraisal

In discussing participation in social appraisal, Stirling, building on Fiorino (1989; in: Stirling, 2008) differentiates between normative, substantive and instrumental rationales. The normative rationale emphasises normatively democratic aspects related to the design of appraisal processes. Participatory appraisals, for instance, intend to bring the voices of marginalised people to the centre of analysis. The substantive rationale refers to a situation where the intention is to “*achieve better ends*” (Stirling, 2008: 268), for instance, to better understand the particular phenomenon in question. Finally, the instrumental rationale “aims to secure particular ends” (Stirling, 2008: 269). With reference to David Collingridge (1980, 1982, 1983) Stirling highlights that an instrumental rationale may bear on appraisals through weak or strong justification. Weak justifications allow the actors to choose a particular form of appraisal, for example, a participatory one, not to foster any particular outcome, but simply to avoid blame in the case that the desired outcome is seen as problematic. In talking of strong justification, Stirling (2008: 276) refers to a situation where dominant interests seek to enact favoured social commitments by framing appraisals to justify a very particular decision outcome. For example, an actor may choose narrow parameters to monitor access to water supply in order to yield a positive picture of policy.

4.3.4 Decision justification

The idea of decision justification is crucial in this thesis, and I use it to illuminate my argument that PM may not represent a uniquely objective and linear process. I, therefore, explain in a bit more depth what lies behind this idea, which is based on the writings of David Collingridge (1980, 1982, 1983). In these early 1980 works, Collingridge critiques what he called the ‘justificationist’ model of decision making, and develops a new theory of social choice. According to Collingridge (1982: 4), the standard view of decisions as being rational, namely that they can be justified based on a rational choice from among all available options, is flawed. His criticism is directed at decision theories in welfare economics, and Bayesian decision

theory. His overall point is that decision theory does not describe how decisions are taken in reality, but, instead, is based on textbook models displaying how they ought to be taken (Collingridge, 1982: 3). Collingridge (1982: 3-4) challenges the models put forward in welfare economics and Bayesian decision theory for their inherent inconsistencies and their narrow scope among all possible types of decision problems. According to Collingridge (1980: 25), many decisions need to be made under conditions of risk, uncertainty and ignorance and, in such situations, there is not sufficient information available to apply models of welfare economics, and their extension in Bayesian decision theory. Despite the problems related to the rational model, the decision maker still is faced with the need to justify the choices made in accordance with it (Collingridge, 1983: 3).

Collingridge's critique of Bayesian decision theory is highly relevant for the rational policy model underlying PM. From Collingridge's observation that decisions are made under conditions of risk, uncertainty and ignorance it follows that PM, conventionally perceived as a rational and linear process, is also subject to such conditions. For instance, insufficient information on groundwater tables may force actors to take decisions between different types of water infrastructure under conditions of uncertainty.

4.3.5 'Performativity' and 'performing monitoring'

The focus on the exercise of power through framings, and on different kinds of rationales on the part of the associated social actors, opens up a new perspective on PM. Viewed in this light, knowledge production in the linear fashion commonly envisaged in PM, is to a significant extent 'socially constructed'. In reality, then, PM can be seen not as the conventionally asserted uniquely rational appraisal of performance. Instead, PM is more about 'performativity' – the management of certain politically necessary performances played out on a theatre stage as described by Stephen Hilgartner for the case of science advisory committees (Hilgartner, 2000). Viewed from the perspective of 'performativity', truth is replaced by performance. Actors are staging performance by putting forward their interpretation of the truth as

informed by their rationales. In such situations, formal processes of appraisal may serve more to 'justify' prior social commitments in instrumental political terms, than actually to help form them in substantive terms. The monitoring of performance turns into 'performing monitoring' as indicated by the title of this thesis.

This alternative perspective on appraisal processes throws a new light on a key argument for public sector PM: the stated need to increase accountability to citizens. From the perspective of performativity, bureaucrats under pressure to demonstrate performance, manipulate PM to create and uphold seeming accountability to the public.

Importantly, a number of different appraisal processes, of various degrees of formality, typically proceed in parallel and relate to each other in complex ways. Not all of them necessarily conform to the same patterns in the forming or justifying of social commitments. Among these parallel appraisal processes, PM is the tip of the iceberg: the most codified and therefore visible appraisal process, and the less visible inputs into appraisals and social commitments, which lie below the waterline, include, for instance, 'tacit knowledge' (Nonaka and Takeuchi, 1995).

Furthermore, social appraisal can be understood as a process of 'muddling through' – rather than comprehensive rational procedures for evaluating policy options (Lindblom, 1959). Here, a number of factors other than PM can be seen to affect the forming of social commitment. These wider considerations illuminate the possibility that the outcomes of appraisal and associated decisions may be the result of contingent forms of 'path dependency', involving contextual detail, material conditions, windows of opportunity, and so on, as in the critiques of the rational policy model discussed above. The dynamics of appraisal addressed here are just one factor in play.

This suggests that PM, rather than representing a uniquely objective process, may, in fact, be subjective and be subject to power. If PM, representing one particular form of appraisal, is not

objective, but subject to constant manipulation, then it may, in some cases, end up justifying rather than forming decisions and wider social commitment.

In summary, the insights from the STEPS Centre's understanding of social appraisal allow a breakdown of the knowledge production process into its knowledge component (appraisal) and wider social component (commitment). The notion of framing brings the political dynamics of knowledge production to the fore. Power can be exercised directly or in indirect forms, through actors' framings, that shape inputs into knowledge production processes. Framing, as discussed by Rein and Schön, explains a process in which the actors, by employing unifying metaphors to create a story line, establish a particular cause-effect relationship. Stirling, Leach et al., who discuss framing in the context of social appraisal, draw attention to the notion that appraisal inputs, such as specific methods or indicators, can be seen also as constructing a particular story line. Furthermore, Stirling, (building on Fiorino) highlights that actors' rationales can be different from an officially stated appraisal goal. An actor may have an instrumental rationale to achieve a particular appraisal result and manipulate knowledge production processes accordingly. This manipulation allows actors to justify decisions.

My contribution to this theoretical discussion has been to elaborate this dynamic in the context of performance. I draw attention to the notion of 'performativity', the management of certain politically necessary performances played out on a theatre stage. Furthermore, I elaborate the STEPS Centre's understanding of social appraisal through the insight that appraisal results and associated decisions may result from different appraisal processes of various degrees of formality as well as from other ontological aspects. In the final section of this chapter, I present the research questions that guide my analysis of PM of rural water supply in Ethiopia.

4.4 Research questions

My main research question springs from my interest in a critical examination of the established belief that ‘monitoring performance’ in the public sector is a rational and linear process that increases accountability to citizens. In line with this interest, my main research question is:

- 1) What role does performance monitoring play in shaping policy decisions on rural water access in Ethiopia?

I investigate the linear model of PM from three different angles. The first consists of a cross-examination of the underlying assumption that the definition of access to rural water adequately represents the different notions of access as relevant to the affected actors themselves in Ethiopia. My first sub- question is:

- a) What are the specific ways in which key actors (those affected and those implementing) at different levels (individual, *kebele*, *woreda*, zone, region, federal and international) frame access to rural water?

In addressing research sub-question (a), I aim to capture the diversity of subjective notions of ‘access’ and to establish how these are represented in the definitions used in formal PM exercises. I propose that this will allow me to question the rational character of the definitions and indicators used to measure ‘access’ to rural water supply in Ethiopia.

The second angle relates to monitoring practices. My intention here is to test whether monitoring processes in reality conform to the linearity assumed by the feed-back function of PM expressed in the results chain of the RBM (Results-based Management) model outlined in Chapter 3. Research sub-question (b) therefore concerns the social dynamics involved in PM practices:

- b) Which actors’ framings are represented in monitoring exercises and results concerning rural water access?

Rather than investigating all possible aspects related to the social dynamics observable in appraisal procedures taken as a whole, research sub-question (b) emphasises the particular dynamics related to framings and their underlying rationales. My interest is to investigate the power dynamics in these specific processes that bring the framings of some actors to the fore while suppressing others.

The third angle of investigation is concerned with the conventional assumption of the RBM model that there is an essentially linear determining relation between PM and associated decisions. In order to test the validity of this assumption in the case of monitoring the performance of rural water access in Ethiopia I ask:

c) What is the explanatory power of PM in decisions taken on rural water access?

This sub-question addresses my interest in the causes shaping specific decisions on rural water access, and the mechanisms that led to these as opposed to alternative decisions. I am interested, in particular, in whether the role of PM is a necessary, a sufficient or merely a contributing factor to test the frequently assumed linear relationship between monitoring results and the decisions prompted by the RBM model. Chapter 5 presents the methodological approach I take to answer these questions.

5 Methodology

Chapter outline

My methodology is based on a qualitative research design and a case study approach using process tracing as the method of data analysis, and a combination of semi-structured interviews, group discussions, participant observations and document review as data collection methods. Chapter 5 presents the research design and takes the reader on the journey from formulation of the research questions to my findings, mainly related to the period of my fieldwork in October 2009 to October 2010. Section 5.1 outlines the motivation for my research and the overall research design. Section 5.2 describes the start of my fieldwork, which was a phase of exploration during which I decided about the type of case study and the specific research sites. Section 5.3 discusses the choice of data collection methods and the issues I encountered when gathering the data including those related to my position of researcher, and ethical considerations. Section 5.4 describes the data analysis process and how this led to the eventual case study focus.

5.1 Motivation and overall research design

Prior to starting my DPhil studies, I had worked and lived in Ethiopia. I first visited Ethiopia in 2006, as part of a five-year research programme consortium on water supply and sanitation - 'Research inspired Policy and Practice Learning in Ethiopia and the Nile Region' (RiPPLE), funded by DFID. From April to November 2007, I was seconded from RiPPLE to work for an Ethiopian government agency, the Amhara Regional Health Bureau. During my secondment, I supported the regional sector agency to develop a framework to monitor uptake of sanitation and hygiene behaviour across the Amhara Region, in line with a new federal guideline developed by the Ministry of Health. While we – that is, a local representative of the WB's Water and Sanitation Programme (WSP) and I – worked directly with the regional Bureau of

Health on monitoring sanitation and hygiene behaviour, other donors and NGOs implementing water supply, sanitation and hygiene activities relied on their own approaches and personnel to monitor their interventions. Although WSP was given the task of implementing a new federal approach, we worked largely in isolation from federal level sector monitoring reform processes to develop a unified WASH monitoring system. My interest in and motivation for investigating PM originated in this experience. I was startled by the number of parallel monitoring initiatives being conducted, and intrigued about to what extent the results of these parallel efforts would be exploited. I was doubtful about whether, in reality, policy processes corresponded to the linear model of PM discussed in Chapter 3, linking monitoring results to decisions under RBM. My interest, therefore, was to approach monitoring not from the main evaluation and RBM literature, but from a fresh perspective that understands monitoring not just as a specific, rule-bound exercise but also as a wider social process.

5.1.1 Research design: a case study approach to trace processes

The nature of the investigation in this thesis is to capture different perspectives on the phenomenon of ‘access to rural water supply’, and to understand the factors that affect monitoring processes and decisions related to this phenomenon in the context of Ethiopia. Andrew Van de Ven (2007: 145) and Andrew Bennett and Colin Elman (2006: 457-8) distinguish between two basic research models in the social sciences: variance models, which examine “effects of causes” and process models, which investigate the “causes of effects”. My research model is process-oriented; it examines the ‘causes of effects’, namely the mechanisms that caused an event to happen, in my case monitoring results and decisions on rural water access. I chose a case study research design to study a specific phenomenon in depth. I understand the term ‘case study’ as describing an intensive and detailed research design situated in a particular context (Ritchie *et al.*, 2003: 52).

According to Bennett and Elman (2006: 456), recent developments in case study research focus on “causal mechanisms as the basis of explanation” and see process tracing as “a key

form of within-case analysis that is now on an equal basis with the method of cross-case comparison". Cross-case comparison, a method drawing comparisons between different cases, was favoured in the early literature on qualitative methods. Tracing processes is at the heart of my investigation not only because it is a novel data analysis method in qualitative research but also and mainly because it is in line with the approach to data analysis that I followed intuitively in many previous research undertakings. When I discovered the methodological literature on process tracing, I saw it as an opportunity to refine a method I was familiar with, and which, at the same time, would be well suited to addressing the research questions. Since process tracing determined my data collection methods and process, I explain this case study method in more detail and my particular application of it.

5.1.2 Process tracing as a research methodology

According to a review by Tulia Falletti (2006) on methodological work on process tracing, it is a method that has been used for several decades, and across various disciplines, to link historic narratives with theoretical explanations. In the field of political sciences, several contributions by George and Bennett establish process tracing as a method to examine social phenomena (George, 1979, Bennett and George, 1997, 2005b, Bennett and Elman, 2006).

According to Bennett and George (2005a: 206-7), the process tracing method

attempts to identify the intervening causal processes – the causal chain and causal mechanism – between an independent variable (or variables) and the outcome of the dependent variable. ... [P]rocess tracing forces the investigator ... to consider the alternative paths through which the outcome could have occurred, and it offers the possibility of mapping out one or more potential causal paths that are consistent with the outcome and the process-tracing evidence.

In practice, tracing a process means tracing the micro-steps and links that lead to a specific outcome by establishing a continuous cause-effect chain (Bennett and George, 2005b: 206). To illustrate the task of the researcher, Bennett and George use a metaphor originally invoked by Michael Scriven: the researcher works like a detective who looks for alternative signatures that may have caused an event to happen (Bennett and George, 2005b: 217). It is important to

note that, in reality, more than one mechanism causes an event, thereby creating several causal paths or multi-causality. Multi-causality rests on an understanding that social phenomena occur in “open systems” where several mechanisms combine to produce an outcome (Danermark *et al.*, 1997: 66, 206). Social science theory helps the researcher to identify particular “causal pathways” among manifold potential factors that may have caused a particular event (Little, 1995: 54). In theory-derived hypotheses of causality, for instance, social scientists test alternative causal explanations for why a particular event happened. It is important to note the assumption of multi-causality underlying the social science method of process tracing in comparison to the commonly held assumption, put forward in Chapter 3, that policy processes, including PM, ought to follow a linear cause-effect or results chain.

In their chapter ‘Process tracing and historical explanation’ Bennett and George (2005b) provide their most in-depth exploration of the method, identifying various ways in which process tracing can be applied. In my thesis, I use process tracing guided by theory, and apply it to test the explanatory power of a specific mechanism. Through theory-guided process tracing, the researcher can verify the predictions of different theories by testing and eliminating alternative, theory-derived, causal processes that may have generated the outcome in question (Bennett and George, 2005b: 218). This is achieved in this thesis, when I study the factors affecting monitoring processes and results. Here, I use the STEPS Centre’s approach to studying ‘social appraisal’ with an emphasis on the exercise of power through framings, as an analytical framework to guide my explanation of these processes. Process tracing features strongly in Chapter 7 where I analyse the political and power dynamics inherent in government monitoring of rural water supply at regional and district level.

I use process tracing also to assess the explanatory power of an assumed causal explanation.⁴⁴ In this application, process-tracing allows me to test the causal power of an explanation as

⁴⁴ George and Bennett use the term ‘independent variable’ rather than ‘causal explanation’.

being “necessary or sufficient for an outcome” (Bennett and George, 2005b: 220), and to uncover previously omitted explanations of a social phenomenon. I interpret a necessary cause to mean factors that are essential for the phenomenon of interest to arise (i.e. they are always present), but which may require other factors. A sufficient cause refers to the imperative presence of a particular factor, and the lack of necessity for other factors, for the phenomenon to arise (Little, 1995: 32). A contributory cause includes those factors whose presence *may* influence the emergence of the phenomenon of interest, but which are not necessary. I do not interpret ‘necessary’ and ‘sufficient’ causes in a deterministic fashion, but rather, in line with the understanding that social science phenomena are characterised by ‘open systems’, I interpret them as probabilistic (Little, 1995) or in terms of exhibiting a tendency (Danermark *et al.*, 1997: 203). In this thesis, I use process tracing to test the hypothesis inherent in the RBM model which links PM in a linear fashion to decisions related to rural water access. An alternative explanation is that PM is merely a contributory factor in these decisions. I explore this by tracing the relation between monitoring results and decisions related to rural water supply at regional, *woreda* and individual water supply scheme level, in Chapter 8.

5.1.3 Limitations of process tracing

There are some constraints that may weaken the explanatory power of process tracing. First, process tracing requires a significant amount of data to support all the steps in a causal process (Checkel, 2005: 18). Therefore, if the data are insufficient to trace an uninterrupted cause effect chain, this may weaken the explanatory power of the method (Bennett and George, 1997: 12). I address this in the present research by focusing on a few phenomena that I studied in depth, and by relying on a combination of data collection methods, that is semi-structured interviews, participant observation and document review, to triangulate my findings, as I explain further in Section 5.2.

Second, researcher bias can cause alternative causal paths that may also explain a specific outcome to be disregarded because of a bias towards the preferred hypothesis (Bennett and

George, 2005b). I would agree that the ‘mechanisms’ I uncover are likely not to be exhaustive. However, I do not see this as a problem because a key aim is to test the hypothesis that PM provides a uniquely rational basis for decisions. I expect that my alternative explanation based on the STEPS Centre’s approach to the study of ‘social appraisal’ is likely to be enriched rather than weakened by additional, alternative causal mechanisms. This is in line with a view of social reality as ‘multi-causal’, proposed above. Notwithstanding this, my analysis is strengthened by its investigation of causal linkages at the micro, meso and macro levels. In the case of my thesis this would, for example, suggest investigating factors affecting decisions on access to rural water from the perspectives of the individual household, the scheme, the local government and the region. Another way in which I strengthen my analysis is that I study the phenomenon of PM of rural water supply from different angles. For example, I analyse the uniquely rational basis of PM by investigating the power dynamics inherent in the monitoring process, as well as studying the factors leading to water access decisions and, among those, the explanatory power of PM.

5.2 Field work phase I – determining my case study

5.2.1 Orienting myself in Ethiopia

When I arrived in Ethiopia in October 2009, for my fieldwork, I was very fortunate to become affiliated to the International Water Management Institute (IWMI) as a visiting research student. In granting me this affiliation and writing the crucial ‘Letter of Recommendation’, Dr Seleshi Bekele, the then Director of the Institute opened doors for me which allowed me to conduct my fieldwork in the country. IWMI provided me with office space, which gave me the opportunity to meet other doctoral students and researchers working on water issues in Ethiopia.

In the first phase of my fieldwork, October to December 2009, I was based in Addis Ababa, the capital of Ethiopia. In this period, I took an intensive course in Amharic, the official working language of Ethiopia, to allow me to engage in basic conversation and get by in Ethiopia on a daily basis. These basic Amharic language skills turned out to be very helpful in interview situations and during my field observations. My efforts to introduce myself in Amharic often broke the ice in the initial interview stage. At *woreda* level and below, I worked mainly through an interpreter, but my basic knowledge of the language allowed me to understand the gist of what my interviewees were talking about, and whether my translator was skipping any of the detail they provided.

While in Addis Ababa, I made regular visits to former colleagues at the RiPPLE project office, who were in shared office space with the NGO WaterAid and several water related initiatives and organisations. These visits allowed me to catch up on news on sector events, and several former colleagues facilitated contacts with the main NGOs and donor organisations working on rural water supply. Another crucial contact was a young British economist seconded to the MoWR, to support the establishment of a WASH monitoring system. I had many conversations with this economist, who became a good friend during the course of the year. We discussed the latest steps related to WASH monitoring within the Ministry and, through our conversations, I gained insights into the dynamics underlying this process at federal level.

Case study site selection

Selection of my case study site evolved over the period of several months. Since my research design was qualitative, sample selection was purposive and based on a number of explicit criteria (Ritchie and Lewis, 2003: 78).

My original idea had been to compare the practices of monitoring rural water supply, of different organisations, that is, NGOs, donors and the Ethiopian government. I wanted to explore the diversity of their approaches and examine those organisations with the most

diverse approaches in more depth. I was interested to know whether greater breadth in the inputs into appraisal, discussed in Chapter 4, affected monitoring results, and also was interested in the relation between monitoring and the decisions taken. In my original research design, therefore, a case represented an organisation, not a geographical or administrative area in Ethiopia. A key criterion for an organisation's selection was obtaining a diverse sample of monitoring approaches. To gain an overview of these, during the first three months of my fieldwork, I conducted interviews with 13 NGOs and 6 bilateral and multilateral donor organisations.

At the same time, I wanted to compare monitoring practices in a particular local setting where I planned also to investigate different notions of access to rural water; thus, specific rural locations in Ethiopia had to be selected as fieldwork sites. I had a number of criteria for a case study site. First, in line with the criterion of diversity of monitoring approaches, I was interested in locations where different types of donors and NGOs were active, in order to facilitate comparison among their approaches. In addition, I assumed that a site where several organisations had water supply interventions would provide a potentially rich set of monitoring practices and decisions to investigate. I also wanted a location that encompassed several agro-ecological zones and with different types of water supply infrastructure constructed over an extended period of time to capture different types of water supply interventions. I was interested in a location with relatively high numbers and low turn-over of water sector staff to ensure there would be a sufficient number of monitoring practices to trace and there would be good availability of interviewees among people who had been engaged in these processes.

The literature on case study methods suggests four broad types of cases that can serve as criteria for purposive selection of a sample (see Figure 5.2). Many of the criteria described above are characteristics of an 'extreme' case - type b in Figure 5.1. Type b cases are 'extreme'

in the sense that mechanisms appear in a purer form (Danermark *et al.*, 1997: 105, Ritchie and Lewis, 2003: 79). In the context of my research the adjective 'extreme' describes the characteristics of a case that exhibits relatively ideal conditions related to a phenomenon, for example, studying excellence in companies by selecting a sample of particularly innovative firms (Patton, 2002b: 230-247). My rationale for choosing an extreme case as sampling strategy was to study the relation between PM and decisions taken in a context with relatively 'ideal' conditions. By 'ideal conditions' I mean a context where the linear model related to RBM is most likely to be practised, and many water related decisions are taken. I assumed that these conditions were more likely to be present in a region with a strong operational capacity in terms of human resources and established working procedures and in *woredas* that were comparatively well-supported and resourced in the Ethiopian context. My logic was that, if I found no clear link between PM and decisions taken on rural water access in *woredas* with high staff and funding levels, detecting such a link would be even less likely in poorly staffed and resourced locations.

Figure 5.1 Types of cases

- a) the normal or typical case yields information on the causal mechanisms of a social phenomenon under normal/average conditions;
- b) the pathological or extreme case is a case study of a critical condition where underlying mechanisms are being challenged and, as a result, come to the surface, for example, where a social norm is challenged, or a case where a mechanism is present in a more extreme form such as studying excellence in companies by selecting a sample of particularly innovative firms;
- c) comparing critical or heterogeneous cases refers to studying several cases that are assumed to manifest the same structure, but differ in other aspects, in order to identify their overarching commonalities or qualitative differences; and
- d) the critical case is a study of an odd, or particular phenomenon, in order to identify mechanisms that allow this condition to occur. Studying what makes extremely old people live to such old age is an example of a critical case. Critical cases are examined to allow a logical conclusion to be drawn for other cases. For example, studying under which conditions a programme is accepted by a group of people who are otherwise generally critical of the programme.

Sources: Danermark, Ekstroem *et al* (1997: 104-5, 170-1), Patton (2002a-247) and Ritchie and Lewis (2003: 79ff)

In practice, a logistical criterion was imposed – related to conducting fieldwork in a rural location in Ethiopia. I realised that I needed a location which I could reach by public transport, where I could find basic accommodation, and someone to facilitate my fieldwork and translate during interviews.

The first step in my case study site selection of identifying a region was easy. Among the nine regions of Ethiopia, the Southern Region was an obvious choice because the regional BoWR (Bureau of Water Resources), in 2008, had conducted a regional inventory of all rural water sources. This provided me with a recent monitoring process and results. The Southern Region is also one of four regions in Ethiopia considered to have high capacity for the conduct of development interventions – another indication of good conditions to trace monitoring processes and decisions on water access. In addition, the regional capital, Hawassa, was logistically not difficult to reach, and the RiPPLE programme had an office and accommodation facilities, which I could use.

When it came to the selection of a local case study site, I chose two *woredas* in accordance with the criteria related to an ‘extreme’ case, namely *woredas* that were most likely to exhibit ideal conditions for PM. I assumed that a good way of judging this was the level and type of support they received. There was support in the form of a Dutch NGO, SNV,⁴⁵ which ran a capacity building programme to support the implementation of the UAP, Ethiopia’s sector strategy aimed at universal access to water supply, in six *woredas*. The NGO’s activities revolved around the conduct of water supply, sanitation and hygiene inventories, and support for strategic planning and monitoring based on these inventories. Similarly, the aforementioned RiPPLE programme had supported water supply inventories in two of the region’s *woredas*. Focusing on areas supported by RiPPLE and SNV narrowed the choice of

⁴⁵ SNV is the Netherlands Development Organisation.

potential case study sites from 134 rural *woredas* in the whole Southern Region (BoFED, 2008: 8) to 8.

I also wanted to capture a wide range of the actors involved in implementing and monitoring access to rural water supply, including local and international NGOs, bilateral and multilateral donors and sector specific as well as multi-sectoral programmes. Two locations stood out: one was supported by RiPPLE, an action-research programme, the WB, a multilateral sector donor, the PSNP, a multisectoral programme to increase food security, and the international, faith-based NGO 'World Vision'; the second *woreda* was supported by a capacity-building project of the NGO SNV, the multilateral donor UNICEF, the PSNP and the local NGO 'Acts of Compassion'. Both *woredas* had a mix of the four most common water supply scheme types described in Chapter 2. The first *woreda* crossed three agro-ecological zones – the highlands, midlands and lowlands, while the second *woreda* was situated in a midland area, but included a variety of improved and unimproved sources covering people's water needs. In terms of livelihoods, in both areas the main occupation was rainfed agriculture in combination with some livestock holdings, and both areas included a range of different wealth groups.

5.3 Field work phase II – data collection

While I collected data throughout my stay in Ethiopia from October 2009 to 2010, the most intensive data collection phase was from March to July 2010. During this period, I travelled back and forth between Addis Ababa, the regional capital Hawassa, two zonal capitals, and the two *woredas*. I spent two months in the first case study *woreda* and five weeks in the second.

The two main data collection methods employed during that period were participant observation and semi-structured interviews. My participant observation activities, which I describe in Section 5.3.1, provided me with an invaluable contextual understanding of the issues related to water supply and the day-to-day activities related to monitoring, planning and

implementing water supply. I used the insights gained from my observations to decide on concrete topics for the semi-structured interviews, described in Section 5.3.2.

5.3.1 Participant observations

Participant observation is a qualitative research method that aims to discover “the nature of social reality by understanding the actor’s perception/understanding/interpretation” of it (Sociology Central, 2003: 1). In the process of participant observation, the researcher watches and immerses herself in the social world related to a particular phenomenon but retains an “observer’s eye” for analysing these lived experiences (Sociology Central, 2003: 1).

I mainly used open participant observation to better understand the wider rural water supply context and the dynamics involved in daily monitoring practices. The groups I interacted with were informed about my research and had given me permission to accompany them. My participant observation experiences consisted of observations of water-fetching activities around water schemes, and water handling in the home, of informal conversations with local residents, government extension staff, NGO and government employees, and also accompanying government staff members on routine monitoring activities and attending government monitoring related staff meetings and activities. Below, I explain my introduction to the two case study *woredas*, followed by a chronological depiction of my participant observation activities.

In March 2010, I went on a first exploratory visit to one of my case study *woredas*, accompanying a UNICEF monitoring officer on one of his regular monitoring visits. Much later, I realised that this had been very problematic. The Head of the *woreda* WME (Water, Mining and Energy) office associated me with UNICEF, which previously had raised allegations of corruption against his office, which I was not made aware of by UNICEF at the time. The fact that I was introduced as interested in monitoring water supply interventions, by the organisation that suspected the WME office of irregular practices did not get me off to a good

start with the WME office. When I returned to the *woreda* several months later, I found it impossible to gain detailed and comprehensive insights into monitoring practices and decisions from the two persons with strategic positions in the *woreda* WME office. Finally, I decided not to use most of the data I collected in this *woreda*. Nevertheless, it was useful to have a comparison to the dynamics at the other field work location. Furthermore, the fact that monitoring practices and decisions were difficult to trace in a *woreda* that received explicit capacity building support for strategic planning based on monitoring, in itself, is an interesting finding.

In comparison, my introduction to the second case study *woreda* was very smooth, thanks to Tsegaw Hailu, the *woreda* coordinator of RiPPLE who was based there. Since Tsegaw was an engineering graduate from Arba Minch University,⁴⁶ he had many contacts in the water sector. I owe the rich data from this field work location to the cordial relationships he had developed with staff in different sector offices at the *woreda* and zonal levels, and his contacts with fellow graduates across the region. The RiPPLE office and his home, which are located on the same compound, were frequently visited by local sector staffs to discuss engineering design issues and current topics of concerns, for instance, how to address the severe flooding which was affecting part of the *woreda* at the time of my visit. This provided the opportunity for me to listen in on conversations and to understand the day to day issues that *woreda* water officers were concerned about. The many informal conversations also gave me an insight into the personal motivations of staff members. Highlights of my participant observation were accompanying the WME officers on some of their monitoring visits and maintenance duties across the *woreda*, including a visit to the highland areas where we spent three days partly to accommodate my interviews and partly to allow them to carry out routine assessments and a

⁴⁶ Arba Minch Institute of Technology (AMIT) is based in the zonal capital, approximately 50km from my case study *woreda*. Established in 1986 as the Water Technology Institute, AMIT teaches various degrees in water technology studies at undergraduate and postgraduate degree level (Arba Minch University, 2012).

feasibility study for a major scheme rehabilitation. Through these activities, I developed a good understanding of the day to day concerns and daily activities of *woreda* WME office staff. I developed great respect for their dedication, creativity and persuasion skills, to improving water supply access in an environment with few resources, small salaries, and little reward for going out of their way.

At *kebele* level, I spent time at different water schemes and at local cafes chatting, via interpreters, to men, women and the local youth, to extension workers from the health and agriculture sectors, and to local officials. These informal encounters with different people were not only very enjoyable, they also allowed me to get a better understanding of the wider context of rural water access in these locations. For example, I acquired a better knowledge of the interactions between health extension workers and WASH committee members and the important role played by one individual, who was not an EPRDF party member, in acting as an advocate in relation to various of the *kebele's* concerns. I discuss further in Chapter 8 how this person influenced the dynamics related to the operation and maintenance of the main water supply scheme in the *kebele*. I would have liked a deeper insight into water fetching and handling at the household level. My observations here were limited to the time during and between interviews. I was prevented from spending extended time in households mainly by the language barrier – many women did not speak Amharic, but another local language, and the time it would have taken to build trust and a comfortable relationship which would have allowed me to stay around the household for extended periods.

At the zonal and regional levels, I participated in various monitoring activities. I attended a quarterly sector review meeting at the zonal level, and I accompanied a regional government evaluator of an NGO activity in one of my fieldwork locations. I spent time in the regional BoWR and the two *woreda* WME offices, during which I was able to chat with staff (via pidgin Amharic and English), and to observe their working practices.

Overall, participant observation gave me a sense of the context in which monitoring rural water access is embedded. Semi-structured interviews formed the backbone of my data collection because they provided me with a crucial source of information for process tracing: narrative accounts connecting outcomes with explanations from the perspective of different people and with their perspectives on water access, a key input to analysing framings, which I discuss in Section 5.3.2.

5.3.2 Conducting semi-structured interviews

According to Steinar Kvale (1996: 2), the term ‘inter-view’ stands for “an interchange of views between two persons conversing about a theme of mutual interest”. His definition takes the term ‘inter-view’ literally as highlighting the aspect of two people exchanging views on a specific topic. This understanding of an interview highlights its subjective nature. The purpose of a research interview, according to Kvale (1996: 5-6), is “to obtain descriptions of the life world of the interviewee with respect to interpreting the meaning of the described phenomena”. Kvale uses the metaphor of a ‘traveller’ to describe the relationship between interviewer and interviewee. Rather than seeing these two as being independent, and the interviewer extracting objective knowledge from the interviewee, Kvale sees interviewer and interviewee as interconnected through their different power positions and backgrounds, which, in turn, influence the interview journey.

My strategy for creating the right conditions for my interview journeys was to try to create a relaxed atmosphere at the beginning of the interview. To put my interviewees at ease I often started with a neutral question about their employment history and professional background. Talking about their personal background encouraged them to get into a story telling mode and provided me with clues about their perspectives and other experience prior to their current position, which might be relevant for my investigation. During the main part of the interview, I introduced various topics, depending on the position and background of the interviewee, and the time available. These main topics were based on an interview guide I developed around my

research questions. They covered framings of rural water access, decisions taken, and monitoring practices. I had defined a second interview guide to acquire background information related to the history of the sector (see annexes 1 and 2). Since I was aware that our different positions would likely influence interviewees' stories, wherever possible I used open ended questions. Since the intention was to capture story lines related to monitoring processes and decisions, a frequent question was "And what happened next?" To uncover the different reasons for specific outcomes I would ask "Why do you think this happened?" To achieve more clarity about respondents' interpretations of a described event I asked "Can you explain in more detail what you mean by this?" (Legard *et al.*, 2003).

I held interviews or group discussions with a total of 222 people. Interview times ranged from 15 minutes to 3 hours; some of my key interviewees were interviewed several times. I audio-recorded and transcribed most of the interviews except for those with water users and members of WASH committees where the time needed for translation during the interview allowed me to make notes of the responses and where the medium of translation led to a reduced version of the story. As explained in Chapter 1, I refer to my interviewees as numbers, which are linked to a confidential list of names, positions and interview dates provided in Appendix 3, while group discussion participants are listed in Annex 4.

5.3.3 Factors affecting my interview 'travels'

Taking up Kvale's metaphor of an interview as a journey that is influenced by the positions of the two persons involved in the conversation, I found that my interview travels often were influenced in several ways. My identity as a Western researcher, in the eyes of many of my interviewees below the *woreda* level, established me in the position of a potential donor, which, I believe, at times influenced the stories they told me. Sometimes users were cautious about mentioning negative experiences with accessing water supply and instead were quick to highlight the need for more funding. In some cases, when interviewing officials, I had the

impression that their answers were formulated to accord with what they thought I wanted to hear.

The closer my research was to the local level, *woreda* and below, the more it was partly mediated by the interpreters on whom I relied. The need for of translation made it more difficult to identify story lines because interpreters would sometimes slightly reword the question, changing it from an open question to one that suggested a certain answer. In translating interviewees' responses, interpreters initially were summarising the stories in a few words, rather than translating the whole account. In addition, the need for translation considerably lengthened the interview time, and reduced the number of questions I could ask. By going through the recordings retrospectively, and discussing in depth the nature of my research, I and my interpreters reached an understanding about a common, good interview strategy.

In addition to the influence on the interview journey of the relationship between me and the interviewee, the subjective experience, professional background (predominantly engineering) or an event immediately predating the interview, sometimes had an impact on interviewees' responses. This was particularly obvious in the context of enquiries about framings of water access. For example, when asked about their subjective interpretation of the official definition, a respondent might refer to an issue that had emerged during a recent monitoring field trip. In other cases, I sensed that interviewees were holding various parallel framings of access in their heads. They would tell me a story in one part of the interview, and later qualify the perspective in another part of the interview. This observation reflects my understanding of framing as a socio-discursive phenomenon. From this perspective, an individual can express different frames of access to rural water depending on the specific context or the question being asked. My account of actors' framings, therefore, is necessarily subjective. At the same time, the fact that I conducted a large number of interviews on framings of access to rural water supply – 64

with representatives of government and non-governmental stakeholders and 41 with users – revealed recurring themes and patterns. This suggests that the subjective accounts I obtained point also to shared understandings.

A specific issue arose with regard to users' framings of access. I could not directly ask users about their perspective on 'access' to water supply since the concept requires abstraction of a situation. Instead, I asked them to describe different issues related to fetching and using water in their everyday lives. I visited users in their homes where I interviewed women, children and men about their daily activities related to fetching and using water. To triangulate and complement their accounts of access, I carried out observations at each protected water supply scheme in the *kebele*, interviewed water user committees, and people fetching water. Altogether, I visited 17 water schemes and interviewed 41 users across three *kebeles*. I obtained further insights on water supply in the *kebele* by interviewing salaried staff and political representatives in each setting, by walking around the *kebele*, and from hand-drawn maps depicting the water supply situation in the *kebele*. Nevertheless, my local user perspective might lack some depth because of the language and cultural barriers highlighted above. It also may be tilted towards prevalent framings of water access – for instance, I enquired in more detail about water for domestic purposes, than water for productive uses.

5.3.4 Positionality and ethical considerations

During the fieldwork for my doctoral project, I worked on issues very closely related to one research theme of the action research project, RiPPLE, namely the topic of 'woreda inventory systems', which aimed at improving WASH information for greater sustainability of WASH services (RiPPLE, 2009). However, my doctoral research questions are distinct from RiPPLE, which mainly evolved around the National WASH Inventory and the prospects for using its results in relation to the distinct information needs of different sector stakeholders.⁴⁷ Where

⁴⁷ A summary of the research results will be published in 2013, in Chapter 2 of "*Achieving Water Security: Lessons from Research into Water Supply, Sanitation and Hygiene in Ethiopia*" (Butterworth et al., 2013)

there was research collaboration with RiPPLE that touched on my thesis topic, I have referenced related joint research outputs. In my view, the repercussions of working on a topic closely related to RiPPLE are mainly positive in that I was able to contextualise my particular research topic within a wider body of research related to monitoring in the water sector. Naturally, the discussions with former colleagues influenced my research journey. For instance, my involvement in discussions related to a regional Water Resources Inventory (WRI) carried out in the Southern Region pointed me to the interesting political dynamics underlying that process, which I trace in Chapter 7.

Gender relations and stereotypical roles also came into play during my research. In particular, many of my, often young, male, interview partners were keenly interested to connect with me on a personal level. While it was sometimes challenging to draw firm boundaries while remaining open and polite, it meant that I had many opportunities to learn about the wider socio-political situation outside the formal interview settings, for example, meeting up for a coffee, lunch, or an evening drink. Unfortunately, I was not able to develop many informal relationships with women, which may also have contributed to an account that is biased towards a male perspective. Other interviewees, particularly local users, tended to see me as a donor, with the related biases in their tales, which I discussed above.

Throughout my research I tried, as much as possible, to adhere to the ethical principles set by the Economic and Social Research Council (ESRC) (2010).⁴⁸ Before embarking on the interview process, I obtained official letters of recommendation from the federal MoWR, and from the regional BoWR, confirming that my research had their institutional support. At the start of all my interviews, I explained the nature of my study, described the interview topics covered and made it clear that any information they gave me would remain confidential. Prior to an

⁴⁸ The ethical principles refer to: ensuring integrity, quality and transparency, obtaining informed consent from research participants, confidentiality of information, voluntary participation, avoidance of harm, and impartiality of the research

interview I obtained verbal consent from the interviewee to conduct and record the conversation. In order to protect the identity of my interviewees, I do not refer to their names and concrete job titles in the text. Annex 3, which links the interviewees' numbers to their personal information will be made available only to the examiners of this thesis. I do not name the field work locations, but the detailed description of the case study context, I hope, provides sufficient material for the reader to interpret and appreciate the case study material I present.

Although adhering as closely as possible to ethical principles, the social science research process is likely to involve practical, very concrete ethical dilemmas for the researcher. Monitoring practices are a potentially sensitive topic that may reveal issues of malpractice and corruption and, during my fieldwork, I encountered situations in which I had to make difficult decisions, particularly in the case of the fieldwork *woreda* where allegations of financial misuse had been posed by UNICEF against the WME office. In all circumstances, my main consideration was to act in the interests of vulnerable individuals and to protect them from harm. Throughout my research the intention was to be transparent and honest in my interactions, and to uphold confidentiality. These precautions notwithstanding, it is impossible for an outsider to understand all the political and power dynamics obtaining in a field work location. In my case, several months after I finished my fieldwork, one of my interpreters faced (unfounded!) rumours that I had reported misuse of budget within a major donor programme, a challenge that threatened him personally and professionally. Luckily, the rumours died down after several weeks.

5.4 Data verification and analysis

After July 2010, the most intensive period of data collection came to an end. I concentrated on the verification of my data in Ethiopia. In the two research *woredas*, I invited my interviewees

for feed-back sessions on my research findings immediately after my stay. The sessions were attended by 8-12 participants, mainly government and non-government sector professionals. The discussions emanating from my presentation proved very useful for verifying my account of monitoring processes and of my identification of factors affecting access-related decisions. For feedback at the regional and federal levels, I returned to Ethiopia in October 2010. At the regional level, I organised a feed-back meeting at the RiPPLE office. At the federal level, my presentation was part of a two-day sector symposium focusing on WASH monitoring in Ethiopia, which I co-organised (Butterworth *et al.*, 2010). The session was well attended and I received useful feed-back from the participants regarding my initial findings. At the federal level, the verification mainly helped to draw attention to issues I might have missed in my interpretation of framings related to rural water access.

The focus then turned to data analysis. As explained in Section 5.1, my main research analysis method is process tracing. The function of process tracing is a) to test the hypothesis put forward by RBM, which assumes a uniquely objective, linear relationship between PM and decisions taken, and b) to identify different factors impacting on a number of selected decisions taken on rural water supply and the specific role of PM among those. While Bennett and George (1997, 2005b) provide a detailed discussion of process tracing as a case study method, their writings are less informative about the step-by-step application of the method. Therefore, I relied on other, more general, literature on data analysis and then devised my own strategy for applying process tracing to my case. Below, I summarise the main steps of my data analysis.

I organised my data using the qualitative analysis software NVivo. To start with, I followed an inductive approach to the analysis. I wanted to 'let the data speak to me' to make sure that I did not miss any findings by overly relying on predetermined explanatory models proposed in various bodies of the literature I had consulted previously. Following guidance on carrying out

qualitative data analysis (Miles and Huberman, 1994, Ritchie *et al.*, 2003) I created categories, first inductively, as I read through the interview transcripts, observations and grey literature, and then by reorganising them hierarchically, also following guidance on qualitative data analysis, using Nvivo (Bazeley, 2006). However, the large number of interviews rendered this task too time consuming. I also found the process tedious because I ended up developing too many and partly overlapping categories, to keep track. One important insight from this more inductive approach was the importance of less formalised monitoring processes for taking decisions on rural water access.

I also encountered difficulties in my attempt to compare the monitoring activities of different organisations – namely sector monitoring by the line ministry, programme monitoring by three donor supported programmes, and project monitoring by two NGOs. One issue that had emerged during data collection was that the line between the different monitoring activities was blurred. The sector donor programmes' monitoring approaches and activities were in a state of flux; they were in the process of being merged with the slowly evolving sector WASH monitoring system across the water, health and education ministries, as explained in Chapter 3. As a result, it was difficult clearly to identify and compare distinct monitoring approaches and processes. In addition, I was not able always to trace the detailed steps of the monitoring processes of every organisation; and when this was possible, it provided a rather technical and boring account. Furthermore, I did not find a great diversity in monitoring approaches. Rather than using fundamentally different indicators and approaches, the monitoring methods differed in their details. At the same time, I discovered that all organisations used a results-based approach to monitoring their interventions.

I, therefore, decided to change my strategy. Rather than comparing different monitoring approaches, I decided to focus on the most prominent aspect in the practices of all the organisations, namely their focus on monitoring 'results'. I decided also to select examples for

which I had detailed evidence that strengthened the process tracing method. Rather than focusing on examples from NGOs, which operate somewhat in isolation from the sector, I focused on the most sector representative monitoring practices, namely sector government monitoring and also on one example from the WB. My case study, therefore, comprises examples of social dynamics underlying formal and less formal PM exercises at different administrative levels in the Ethiopian rural water supply sub sector. This approach has the advantage that it provides an overview of the political and power dynamics involved in PM, from the global to the very local level.

The results of my data analysis are organised in line with the three angles of investigation exemplified by my three research sub-questions set out in Chapter 4. I discuss the findings related to the three angles of investigation in three separate chapters that contain my empirical findings. In the first empirical chapter, Chapter 6, I focus on actors' framings of rural water access in Ethiopia to address research question 1a:

What are the specific ways in which key actors (those affected and those implementing) at different levels (individual, *kebele*, *woreda*, zone, region, federal and international) frame access to rural water?

In the second empirical chapter, Chapter 7, I turn to the social dynamics inherent in PM to address research question 1b:

Which actors' framings are represented in monitoring exercises and results concerning rural water access?

In the third empirical chapter, Chapter 8, I investigate the factors underlying selected decisions on rural water access at different administrative levels to address research question 1c:

What is the explanatory power of PM regarding decisions taken on rural water access?

6 Framings of rural water access in Ethiopia

Chapter outline

The focus of this chapter is framings of rural water access for Ethiopia. I capture framings at different administrative levels – from global to local – and related to different types of actors – government, donor, NGO representatives – and men, women and children, that experience rural water access as part of daily life. The intention in this chapter is to capture the diversity of rural water access framings and establish to what extent official framings, used as yardstick for ‘access’, represent the different notions of access proposed by different stakeholders. Section 6.1 examines access framings contained in international level normative frameworks and guidelines and official national documents. Section 6.2 examines interpretations of access by sector government stakeholders and representatives of the NGO and donor communities in Ethiopia. Section 6.3 explores the access notions of those affected. Section 6.4 summarises and discusses the differences between diverse notions of access related to lived experience, and the official parameters used to measure ‘access’ in Ethiopia and internationally.

6.1 Access framings in international normative guidelines, benchmarks, and the Ethiopian Universal Access Programme

Internationally, ‘General Comment 15’ on the right to water, adopted by the UN Committee on Economic, Social and Cultural Rights in November 2002, codifies the normative criteria for ‘access to water’. The MDGs agreed upon in 2000 precede the normative framework set by the General Comment. By specifying indicators and benchmarks for access to water supply at the international level, MDG 7c strongly affects rural water access framings at the international level. At the national level, in Ethiopia, the UAP (Universal Access Programme) sets official standards for rural water access. Below, I characterise and discuss the framings inherent in these documents.

6.1.1 General Comment 15 on the human right to water

In 2010, eight years after publication of General Comment 15, the UN General Assembly recognised the human right to water with 122 votes in favour, none against, and 41 abstentions (UN, 2010). General Comment 15 sets out a number of normative standards to achieve the human right to water. According to General Comment 15, water must be “adequate for human dignity, life and health” (2002: 5). It stresses also that:

The adequacy of water should not be interpreted narrowly, by mere reference to volumetric quantities and technologies. Water should be treated as a social and cultural good, and not primarily as an economic good. The manner of the realisation of the right to water must also be sustainable, ensuring that the right can be realised by present and future generations.

More particularly, General Comment 15 defines a number of factors underlying ‘adequacy’, in relation to availability, quality and accessibility. ‘Availability’ refers to water for domestic and personal use, including “drinking, personal sanitation, washing of clothes, food preparation and personal hygiene” (UNESCO, 2002: 5), based on WHO guidelines on minimum water quantities (Howard and Bartram, 2003). ‘Quality’ refers to WHO guidelines for drinking-water quality, to prevent and control water-borne diseases (WHO, 2010), and on peoples’ perceptions of odour, taste and colour. Further, General Comment 15 (2002: 6) identifies four dimensions of ‘accessibility’:

1. physical accessibility refers to physical reach and security sensitivity to gender requirements when accessing a water service;
2. economic accessibility refers to the affordability of accessing water services;
3. non-discrimination refers to water services not discriminating against vulnerable and marginalised sections of the population; and
4. information accessibility refers to the right to obtain information on water issues.

These General Comment 15 criteria set the broad normative scope for thinking about ‘access to water supply’. However, in many respects, the Comment is at an abstract level. For example, it does not specify the meaning of water as a ‘cultural good’ and ‘affordability’ is not defined in

concrete terms. The two aspects where the Comment refers to specific minimum guidelines are ‘quantity’ and ‘quality’, both based on previously existing WHO guidelines. As already discussed in Chapter 2, the WHO defines the minimum quantity to ensure ‘basic access’ as 20 litres per person per day (l/p/d) (Howard and Bartram, 2003). Based on a number of studies, the WHO estimates that people are likely to use 20 l/p/d if total collection time is below 30 minutes and distance to the water source below 1,000 metres (Howard and Bartram, 2003: 17). It is for this reason that many definitions of ‘access to rural water supply’ refer to a minimum volume of 20 l/p/d in relation to an indicator of distance or time for fetching water. It is these aspects, volume and distance (or time to fetch water), that commonly form part of water access framings. They are reflected in the Ethiopian context, in official definitions and in framings based on Ethiopian sector stakeholders’ statements, as I discuss in Sections 6.1.3 and 6.2.

6.1.2 Millennium Development Goal 7c

Recall that MDG 7c intends “to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation” (UN, 2008). The indicator put forward for Target C under MDG 7 measures “the proportion of population using an improved drinking water source” (UNDESA, 2012). When comparing the MDG target with the indicator used to measure it, two issues stand out. First, the adjective ‘sustainable’ is omitted from measurement; second, the adjective ‘safe’ is measured via the proxy indicator ‘improved drinking water source’. As explained in Chapter 2, according to the JMP of the WHO and UNICEF, responsible for monitoring MDG 7c, ‘improved’ refers to a list of technical facilities⁴⁹ that, “by nature of [their] construction or through active intervention, [are] protected from outside contamination” (WHO and UNICEF, 2010).

⁴⁹ Including the following: “rainwater, protected spring, protected dug well, tubewell, or borehole, public tap or standpipe, piped water into yard/plot, and piped water into dwelling” (WHO and UNICEF, 2010).

As stated earlier, the MDGs precede General Comment 15, and, therefore, cannot be assessed directly against this normative framework. Nevertheless, it is striking that the MDG 7c indicator does not make reference to any of the normative aspects - availability, quality and accessibility - that comprise the human right to water. I interpret this as representing a technical perspective on water access, or that 'access' is viewed from the perspective of an engineering task of providing different water supply scheme types. Focusing on the technical aspects of rural water access may also appeal to bureaucrats because it is easier to monitor than more normative aspects such as equitable access. I apply this broad interpretation also to the WHO guidelines on volume, distance and quality. All these parameters can be seen as reflecting typical engineering tasks related to the design and construction of infrastructure facilities. An engineer bases his or her infrastructure design on a projection of the quantities of water needed, and devises pipelines to reach prospective customers from a specified distance. The focus on an 'improved drinking water source' makes an artificial distinction between sources that are 'safe', based on a particular infrastructure design classified as 'improved', and all other sources that are 'unsafe'.

In light of the framing concepts discussed in Chapter 4, the global JMP indicator tells an abridged story that relates water 'access' largely to the existence of a particular type of infrastructure. In contrast to this technical perspective, there is a real 'grey' zone where people use multiple – improved and unimproved – sources of water for different purposes, and where other dimensions, such as affordability or the discrimination of vulnerable and marginalised people, also impact on the realisation of 'access'. This much more complex access picture emerged in Chapter 2, in the discussion of the diverse aspects impacting on peoples' water needs. In Section 6.3, where I discuss local notions of rural water access, the shortcomings inherent in the JMP's narrow, technical framing become even clearer. Next I explore the notion of access in the Ethiopian UAP.

6.1.3 Ethiopia's Universal Access Programme

In Ethiopia, the *Universal Access Programme for Rural and Urban Water Supply and Sanitation* (MoWR, 2005, 2009a) provides official standards for access to rural water supply. Developed in 2004, and revised in 2009, the UAP is Ethiopia's "road map" for improving water supply and sanitation and the country's sector strategy for achieving the MDGs (MoWR, 2009a: 1). While the original UAP document does not contain a precise definition of access to water supply, its 2009 revision uses the two terms "water supply access coverage" and "water supply coverage" (MoWR, 2009a: 23). 'Water supply access coverage' estimates the proportion of the rural population that **potentially** can obtain 15 l/p/d safe water, from a functional or temporarily non-functional but repairable water supply facility, within a 1.5 km radius of the beneficiary's dwelling (MoWR, 2009a: 23-4). 'Water supply coverage' refers to populations for whom the intended levels of service are achieved, i.e. where every person obtains 15 litres of drinking water per day from a source within 1.5 km radius of their home (MoWR, 2009a: 23). The UAP makes no reference to water quality.

Reference to these two descriptions of rural water 'access' means that the UAP differentiates between and understands two levels of services. In the view of senior ministry officials, the first definition represents the ministry's current pragmatic yardstick for measuring 'access' based on the challenging conditions in Ethiopia. The second refers to a future condition that the MoWR hopes to achieve in the mid- to long term (Interview #206). Below, I elaborate on the differences between the UAP's definitions and compare them with the international level framings discussed above.

In its definition of 'water supply coverage', the UAP refers to the parameters of 'volume' and 'distance' to the water source, specified in the WHO guidelines discussed above. In choosing these parameters, the MoWR is following international guidelines, which means that the WHO standards directly influence the framing of access to water supply in Ethiopia. However, in reducing the minimum daily quantity from 20 to 15 litres and increasing the distance from a

dwelling to the source from 1km to 1.5km, the UAP introduces considerable relaxation of the internationally suggested minimum standards, with considerable, potentially detrimental, consequences, first and foremost, for women's access, women being the main carriers and managers of domestic water. In Chapter 7 I explore possible reasons for this relaxation of standards. For reasons of clarity, in the rest of the thesis, I refer to the UAP's definition of 'water supply coverage' as the '**volume-distance**' parameters.

The second UAP definition, 'water supply access coverage', refers to potential rather than actual access. It refers to an average beneficiary number based on a minimum yield and minimum capacity of lifting devices (water pumps) for each scheme type. These are outlined for selected scheme types in Table 6.1 (MoWR, 2009a: 24).

Table 6.1 Average beneficiaries for selected water supply scheme types

	Hand dug well	Protected spring	Shallow well	Deep well
Average beneficiaries per scheme type	270	338	457	3,313

Source: MoWR (2005: 41)⁵⁰

I explain the notion of access related to this definition using the example of a hand-dug well, the first scheme type displayed in Table 6.1. According to 'water supply access coverage', a hand-dug well's coverage is estimated at 270 people on average - regardless of whether the scheme is functional. The revised UAP gives specific instructions on how to calculate 'water supply access coverage', shown by the formula below. It involves multiplying the total number of each scheme type by the national average number of beneficiaries per scheme type, and

⁵⁰ The original table contains more scheme types. The ones presented in Table 6.1 are those referred to by interviewees and present in my case study *woreda*.

dividing this number by the official population figure for the area in question - provided by the CSA (Central Statistical Agency) (MoWR, 2009a: 24).

$$\text{Access coverage (\%)} = \frac{H \times A}{P} \times 100$$

H = Number of sources
A = National average number of
beneficiaries for scheme type
P = CSA Population of the area

As indicated in the above formula, the ‘water supply access coverage’ figure is usually expressed as a percentage. This calculation method moves away from the ‘volume-distance’ framing and the notion of ‘water supply access coverage’ effectively is based on a hypothetical situation: a hand-dug well theoretically serving 270 people (see Table 6.1). This takes no account of how many people live within 1.5km of the well, how many litres of water they collect per day and whether or not the scheme is functional. In an attempt to clarify ‘water supply access coverage’, in what follows, I refer to this as the ‘**scheme potential**’ parameters. During the time of my fieldwork, the MoWR reported progress towards universal rural water access based on these ‘scheme potential’ parameters.

By using the infrastructure scheme as shorthand for ‘access’, the UAP’s ‘scheme potential’ parameters align with the JMP, representing a technical perspective. My interpretation of the MoWR’s technical framing resonates with an observation by an Ethiopian sector professional that:

Quite frequently, in Ethiopia, planners have emphasised the agronomic, engineering or technical aspects of water projects, and most of the important decisions have been made by technical experts, with little regard to issues of management and beneficiary participation (Amberbir, 2007: 33).

From this it follows that, in the case of the UAP, the abridged story lines emerging from the framings inherent in ‘volume-distance’ and ‘scheme potential’, focus on the technical

parameters related to ‘access’. I have referred to the ‘volume-distance’ parameters as a relaxed version of the WHO guidelines. And the UAPs ‘scheme potential’ parameters strongly resemble the JMP indicator referred to above, which reports on the use of infrastructure. I interpret these resemblances between global and Ethiopian ‘access’ framings as indicating that international framings have a strong influence on national level framings of ‘access’ in the case of Ethiopia.⁵¹

However, there are differences between the JMP and the UAP perspectives. For instance, while the JMP measures ‘use’ based on data obtained from household surveys, the MoWR extrapolates ‘access’ figures based on counts of the infrastructure in place. In performance-related terminology, the JMP measures an ‘outcome’ while the MoWR measures an ‘output’, leading to the contestations reported in Chapter 3. This difference could be interpreted also as stemming from the JMP’s demand perspective which measures ‘use’, compared to the MoWR’s supply perspective which measures the ‘hardware’, but not a ‘service’. A comment from a senior monitoring expert in the MoWR confirms this. He stated explicitly that the ministry is concerned with “monitoring the supply side” (Interview #186). One reason for the methodological differences in the JMP’s and the UAP’s measures of access is the former’s need for data sets that are comparable across countries, which it obtains via household surveys carried out by national statistical agencies (discussed in Chapter 3). The JMP, therefore, relies on a global indicator. As a result, its framing of ‘access’ is necessarily path-dependent, that is,

⁵¹ In interviews, the same officials who defended ‘scheme potential’ to report against the UAP acknowledged possible shortfalls related to this method for capturing the real situation on the ground. I interpret this as due to the discursive nature of framings where individuals may express different framings depending on their situation: formally, federal level MoWR employees, some of whom are in senior positions in the EPRDF, Ethiopia’s ruling party, need to report progress towards the UAP and PASDEP benchmarks. They are accountable for achieving formal government targets, which tend not to reflect the real situation on the ground. At the same time, off the record (e.g. in informal conversations in the corridor), these individuals are more critical of the official approach to measuring access.

the JMP's framing of access is highly dependent on the availability of internationally comparable datasets.⁵²

A final observation concerning the framings of 'access' relates to the circularity between its definition and the indicators used to measure it. Rather than the definition determining the methods for measuring 'access', in the case of water supply, the definition is driven by the indicators used to measure access, namely scheme types, volume and distance. In other words, it is the method for measuring access that drives its definition in JMP and UAP access framings. This circularity resonates with Lyotard's observation on 'performativity' that performance indicators replace truth. In Section 6.2 I examine the views of Ethiopia sector stakeholders, across various administrative levels, on the notion of access.

6.2 Ethiopia sector stakeholder framings of rural water 'access'

In my examination of Ethiopian sector stakeholder framings of rural water access, I am interested in particular in how far they offer alternative perspectives to the official definitions discussed for the UAP.⁵³ The perspectives presented below follow the administrative hierarchy in Ethiopia, descending from the federal level to the region, zone and *woreda*. The section consists of two parts that examine the views of government stakeholders, and those of donor and NGO representatives.

6.2.1 Framings of water sector government stakeholders

Consistent in the framings provided by government staff, whether technical experts or political appointees, at federal or *woreda* level, was the reference to the difference between the UAP's

⁵² For further discussion on the differences between JMP and the Ethiopian MoWR access figures, see Butterworth *et al.* (2013).

⁵³ I interviewed 38 government stakeholders, 11 donor and 15 NGO representatives in Ethiopia on the issue of 'rural water access' framings. In order to capture framings, I asked interviewees about their understanding of rural water 'access'. Most actors started by referring to one of the official UAP definitions. When my interviewees did not elaborate on the UAP definition from their perspective, I asked them to what extent the stated definition corresponded with their personal views on 'access'.

two access definitions contained in the notions of ‘volume-distance’ and ‘scheme potential’. Many interviewees also voiced their reservations about the ability of the ‘scheme potential’ parameters to capture ‘real’ access situations. Below, I give examples of these views.

At federal level, a statement from a senior official in the MoWR, highlights a common view on the shortcomings of the ‘scheme potential’ notion. When asked about his understanding of water ‘access’, he acknowledged that:

In the rural areas, our service level is 15 l/p/d within a radius of 1.5km. This is really a challenge, you know. In some densely populated areas, there are really thousands of people using a water scheme and that water – 15 l/p – may not be sufficient. In this case, we wrongly consider that we are supplying a lot of people with limited resources. In some other scarcely populated areas, a hand pump, which can be used by 500 people, may only be used by 10 or 20. In this case we have the potential but the potential is not fully utilised because it is a sparsely populated area. These are the challenges of our universal access calculation. (Interview #84)

This senior official makes the point that the UAP’s method for calculating access based on the ‘scheme potential’ parameters, fails to capture the real picture. His particular concern is over beneficiary estimates by scheme type, represented by the letter ‘A’ in the UAP access calculation model presented above. He was apprehensive that, in reality, schemes may be used by many more or many fewer people than assumed under the UAP ‘scheme potential’ interpretation of access.

Sector staff in regional and zonal sector offices expressed similar reservations about the ‘scheme potential’ parameters. A former head of a zonal WME (Water, Mines and Energy) department, for example, told me that:

I cannot say even our way of calculation is accurate because we are not looking at the actual population who are using that scheme but simply say a hand-dug well can serve this much population. When this is seen in the actual time, it differs. (Interview #211)

In this extract, the former department head stresses that extrapolation of the population to achieve access numbers is inaccurate because it is not indicative of actual numbers of scheme users. One of the engineers in the regional BoWR highlighted concerns related to the fact that

current reporting does not take account of the parameters of the UAP 'volume-distance' definition. Currently, the sector does not capture the fact that people may fetch very small volumes of water and may travel from farther away than 1.5km (Interview #148).

The views of employees in the WME office at *woreda* level were the most diverse among all government staff I interviewed. They framed access by referring to the situation in their *woreda*, and based on their individual experiences and responsibilities. The water engineer in the office, who is responsible for the office's planning and reporting, reiterated the point made by officials at the zonal and federal levels. He highlighted that the UAP's way of calculating access based on 'scheme potential' does not correspond with the actual number of scheme users in the *woreda*. According to him, sometimes more and sometimes fewer people are served. He drew attention also to the importance of hygiene and sanitation in relation to water supply to achieve health benefits (Interview #96). His colleague, formerly the head of the *woreda*'s WME office, stresses that the entire process of fetching water to handling it at home, contributes to access and noted that governance issues, particularly related to scheme management, could constitute an obstacle to access. He pointed to inequalities in access between different *kebeles* (Interview #179). The mechanic, responsible for O&M issues in the *woreda*, described access in terms of the technical aspects related to scheme operation and repairs. He told me that there was great pressure put on the WME office from the communities, the *woreda* council, and NGOs, to improve functionality rates in the *woreda* (Interview #162). The staff member responsible for community mobilisation commented on the different perceptions of the value of protected water supply schemes across the *woreda*. In the highland areas of the *woreda*, where people fetch water from unprotected springs during much of the year, the WME office needs to create awareness of the importance of using water from improved schemes. Encouraging users to pay fees and committees to repair broken down schemes in the highlands, is a challenge for him. In contrast, in the lowlands, where unprotected water is less available, residents regard water schemes as an important

issue. Here, the challenge is persuading people that water from hand-dug wells is fit for drinking, and convincing them of the value of these low-cost facilities (Interview #166).

The above examples show that, for sector government stakeholders, the ‘scheme potential’ parameters of the UAP represent the main reference for thinking about rural water access. When voicing reservations regarding the ‘scheme potential’ access notion, sector government stakeholders highlighted that the formula estimating beneficiaries by scheme does not represent the real picture, in other words, does not provide an accurate account of water scheme users.⁵⁴ The second common criticism relates to shortcomings of the ‘scheme potential’ compared to the ‘volume distance’ notion of access. A key finding here is that many of the sector stakeholders do not refer to dimensions that go beyond the technical perspective represented in the UAP. It appears that sector staff, generally, are caught up in the parameters set by the UAP access framings.

The highest degree of framing diversity was evident among government staff at the *woreda* level. Here, sector staffs frame access in close relation to their daily work. The community mobiliser, for example, was concerned with local residents’ perceptions about what is a ‘good’ water source and the consequence this has for his work. In contrast, the technician, first and foremost, is interested in the technical aspects related to scheme repair in relation to access, while the former office head highlighted governance issues related to scheme management.

6.2.2 Framings of donor and NGO representatives

Compared to government staff, the most obvious commonality among NGO and donor representatives is their consistent reference in describing access, *not* to ‘scheme potential’, but to the ‘volume-distance’ parameters in the UAP definition. All the interviewees from these two groups referred to access in terms of collecting 15 l/p/d from within a 1.5km distance of

⁵⁴ Their reservations are confirmed in my findings in Chapter 7 of the different methods employed to calculate access in a regional WRI (Water Resources Inventory) in the Southern Region where counting actual users compared to average beneficiaries resulted in a difference of just under 20 percentage points (35.5% compared to 53.9%).

the individual dwellings. A UNICEF representative⁵⁵ expressed a general attitude when he explained to me that:

UNICEF works very closely with the Ethiopian government, so there is not much point in UNICEF having its own version of access and the government having another one. So the definition of government is also the definition of ours. (Interview #216)

It is not clear to me whether interviewees consciously chose between the two definitions in the UAP, or whether they are quite simply not conversant with the MoWR's decision to base official 'access' figures on the assumptions underlying the 'scheme potential' parameters. It may be that contestations over official progress towards 'universal access' between the MoWR and its external partners, discussed in Chapter 3, are related in part to the different interpretation of 'access' among Ethiopian government staff and other, non-government, stakeholders.

When prompted to reflect on the official definition of 'access' both NGO and donor representatives, adhered mainly to the parameters in describing access. Specifically, interviewees made reference to how different parameters can impact on the volume of water consumed or the distance travelled. For example, local representatives from two international NGOs highlight that the topography, for example, the presence of a gorge, may make it impossible for users to walk to a scheme even if it is within 1.5km distance from their home (Interviews #98, #183). In addition, representatives of several NGOs and donors pointed out that users do not necessarily collect 15 l/p/d even if the source has sufficient yield to supply this volume, and several highlighted, in this context, that it is difficult to increase water consumption because this would require a behaviour change (Interviews #89, #112, #157, #161, #187, #212). This was in the context of interviewees referring to using more water for personal hygiene and other domestic uses.

⁵⁵ Although, at global level, UNICEF is part of the JMP, UNICEF country programmes, referred to by my interviewee, use the country's guidelines as the yardstick for defining access to water supply.

One point made clearly by representatives of UNICEF and the WB, both of whom rely on government staff for reporting the progress related to their interventions, was their concern over the accuracy of government reporting on access (Interviews #99, #149, #181, #216, #217). I interpret this to indicate that, for these donor representatives, an important worry is not so much which parameters are measured, but that the parameter in question is reliable. This could be interpreted as donor representatives expressing an instrumental rationale, namely a keenness to establish a reliable monitoring system to avoid accusations (from the donor country's taxpayers) that the performance of their interventions could not be assessed.

Overall, then, for donor and NGO representatives, the picture regarding the diversity of their framings is similar to that for government stakeholders assessed above. Many of the comments made by NGOs and donors focus on the parameters related to what they possibly and, in this case, wrongly interpret as the official access definition in Ethiopia, namely the 'volume distance' parameters. Reference to the 'volume-distance' parameters related to 'access' was common among sector professionals inside and outside of government. The main difference was that many government representatives referred directly to the UAP definition *not* taking account of the volume-distance parameters, while donor and NGO representatives commented more generally on the *challenges* related to fulfilling the 'volume-distance' parameters in reality. These findings point to the dominance of the WHO guidelines in framing Ethiopian sector stakeholders' notions of access. Furthermore, the circularity between the desired outcome (access) and the methods used to assess the outcome (volume and distance or infrastructure), again, is apparent. While, in theory, indicators are used to measure a desired outcome, here, they actually define the outcome, which leads to a circularity between the two. This point became particularly clear when I asked different sector stakeholders about their understanding of 'access': most people responded by referring to a range of established

indicators for measuring ‘access’ such as volume, time taken to fetch water, distance to the source and water quality standards.

Among the stakeholders interviewed, only *woreda* level staff provided more differentiated views on access. Their framings range from governance issues related to scheme management, to operation and maintenance, and to different perceptions about the value of protected sources in the highland and lowland areas. In Section 6.3, I discuss notions of water access in a highland and lowland *kebele* in my case study *woreda*.

6.3 Notions of access from those affected

In this section, I present and analyse notions of ‘access’ expressed by those people directly affected by it, i.e. the women, men and children living in rural areas for whom ‘access’ to water forms part of daily life. My intention is to capture, as comprehensively as possible, diverse perspectives on ‘access’ in their roles of residents and water users, and from the viewpoints of local officials and government staff members. In order to capture a variety of situations, I present perspectives from an area with low water availability, a lowland *kebele*, and from a relatively water abundant area, a highland *kebele*. In both cases, I complement the findings from interviews and group discussions with my field observations to obtain a rich representation of the diverse aspects that make up water ‘access’ in these two locations.

Both *kebeles* are situated in the same *woreda*, in the Southern Region, along the main road between two zonal capitals, and along the shores of the lake, visible in Figure 6.1. According to regional population projections (BoFED, 2009), the *woreda* had 74,901 inhabitants in 2010, spread across 24 *kebeles*. Except for the *woreda* capital, all the *woreda kebeles* are classified as rural. The *woreda* covers the three main agro-ecological zones of Ethiopia (lowlands, midlands

and highlands) described in Chapter 2. Water is obtainable from a mix of groundwater, surface water and springs, and, particularly in the lowland areas, rainfall variability within and between years is high.

Figure 6.1 View of my case study *woreda* from the highlands



Source: Author

The *woreda's* residents make their living through a combination of rainfed agriculture, traditional, small-scale irrigation and livestock breeding. In the lowland areas of the *woreda*, there are two cash crops, bananas and mangoes, and other crops that mainly are for subsistence such as *teff*,⁵⁶ maize, sweet potato, cassava and various vegetables; in the highlands farmers also cultivate apples and eucalyptus for cash (Abebe *et al.*, 2010). A study in 2009 identified three different wealth groups in the *woreda*. The fact that focus group discussants characterised people who had no need to beg for food as belonging to the medium wealth group is an indication that, overall, wealth levels are not much above the poverty line

⁵⁶ *Teff* is an important grain in Ethiopia, used to make the national dish, *injera*.

(Abebe *et al.*, 2010).⁵⁷ The *woreda* is classified as food insecure and is covered by the PSNP (Productive Safety-Net Programme).

Table 6.2 Access according to ‘scheme potential’ formula in lowland and highland *kebele*, July 2010

	Lowland <i>kebele</i>	Highland <i>kebele</i>
Improved schemes	3 hand dug wells 1 deep well	3 protected springs
Number of estimated beneficiaries according to ‘scheme potential’ formula	4,123 (= 3 x 270 + 3,313)	1,014 (3 x 338)
Total <i>kebele</i> population	5,885	2,028
Access according to ‘scheme potential’	70%	50%

Source: MoWR (2005: 41), field observations of schemes and reports from kebele administrators on CSA population projections for 2010.

Before discussing the different perspectives on water access in the two *kebeles*, I briefly describe the ‘access’ situations in the two locations, according to the UAP’s ‘scheme potential’ parameters. Table 6.2 presents a summary of the number and type of schemes by *kebele*, the total number of beneficiaries served according to the ‘scheme potential’ formula explained in Section 6.1.3, and the resulting percentages. According to these calculations, in 2010, 70% of the lowland and 50% of the highland *kebele* population had access to water. In the conclusion to this section, I contrast these figures with the notions of access from the perspectives below.

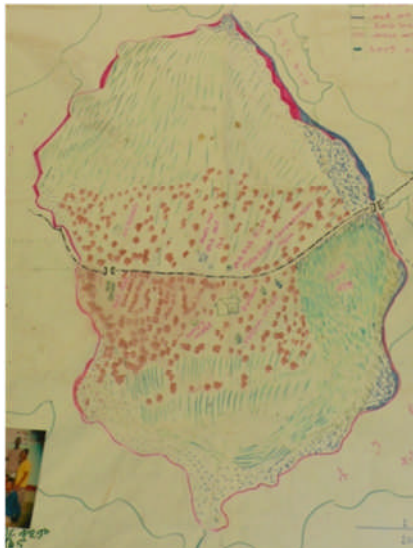
6.3.1 Notions of access in the lowlands

The lowland *kebele* is situated on the main road between the *woreda* and the zonal capital. According to the CSA’s 2010 population projection, 5,885 people reside in the *kebele*, a substantial increase on the mid 1980s when the first few hundred people started settling there

⁵⁷ People with a small or no land holdings, and those engaged as daily labourers, were described as ‘poor’, while people with at least 0.25 ha of landholding and who did not have to beg for food were described as ‘medium’. Those with at least 1 cow, 0.5 ha of land or a house with a corrugated iron roof were described as being in the ‘best off’ group.

(Interview #133, #192).⁵⁸ This figure is approximately 25% higher than recorded by local health extension staff. Although classified as rural, the *kebele* has some municipal characteristics, such as the settlement's a grid-like structure (see map in Figure 6.2). Peoples' dwellings are concentrated along the main road, while their fields expand to east and west, away from the road (top and bottom of map in Figure 6.2). Some of the *kebele*'s residents are classed as food insecure and receive support from the PSNP, but staff from the WME office told us that some farmers produce cash crops and have sufficient financial resources to afford private water connections.

Figure 6.2 hand drawn map of the lowland *kebele*



Source: author's photograph of a map in the kebele's health post

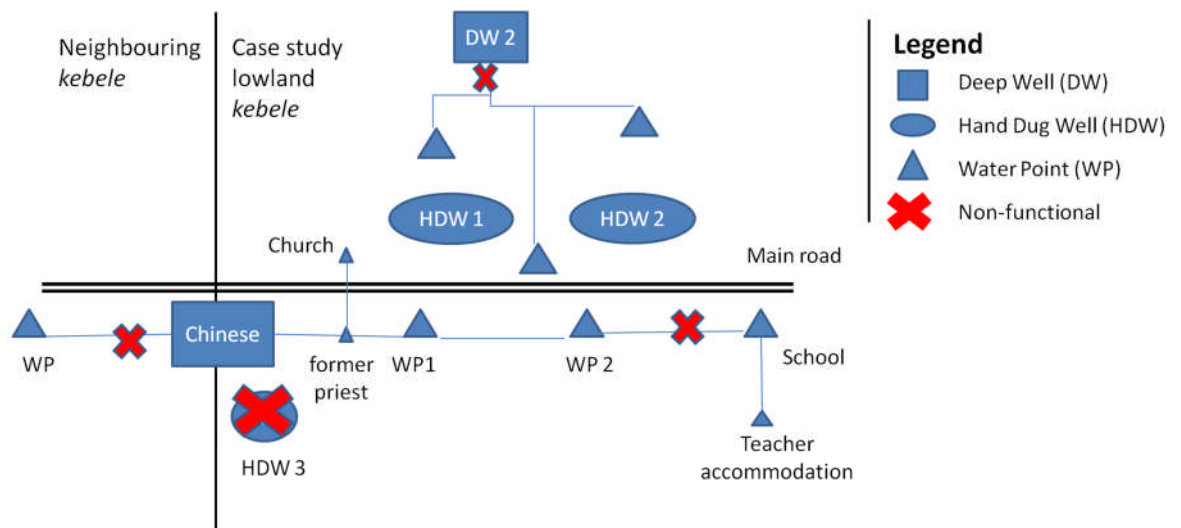
Water availability in the *kebele* is mixed. The main (unprotected) water source in the *kebele* is a perennial river that originates in the highlands. According to the *kebele*'s agricultural extension workers, the river and the small springs along its course are used for traditional irrigation and for watering cattle (Interviews #218, #219), and according to the *kebele*'s health extension staff, for domestic purposes such as washing clothes and domestic utensils (Interviews #85,

⁵⁸ The start of this *kebele*'s settlement was part of the nation-wide Villagisation Campaign promoted by the *Derg* regime with the intention to "simplify service provision, tax collection and control over the population" (Pankhurst, 1992: 50).

#214). Overall, the perception is that water is scarce, particularly during the dry season from December to April; the last major drought had occurred just 18 months before my visit to the area.

The *kebele*'s water supply infrastructure includes five protected water supply schemes: two deep wells and three hand-dug wells. The scheme map in Figure 6.3 shows that all these schemes are situated close to the main road. The main source of drinking water in the *kebele* is a deep well, known locally as the 'Chinese' scheme because it was constructed with the support of the Chinese Government in 1988. The scheme has two functional public water points along the main road and one non-functional public water point in the neighbouring *kebele*. A fourth, non-functional water point is located in the school compound. There are also two private connections, one in the church compound and the second in the compound of the retired priest. The recent repair to the Chinese scheme is used in Chapter 8 to analyse the factors affecting specific access decisions.

Figure 6.3 improved water supply schemes in the lowland *kebele*, June 2010



Source: Author

DW 2, at the top of Figure 6.3, at the time of my visit, had yet to be connected to the electricity grid to become operational. There are three hand-dug wells, of which two are functional.

However, because of frequent periods of breakdown and disrepair at all schemes, the *kebele's* residents often have to travel 5km to fetch water from a distant *woreda* town. Next, I summarise people's experience of fetching and handling water in the *kebele*, based on interviews mainly with women and girls.

An important issue was related to water quality at hand-dug wells. Most women and girls dislike this water. One woman explained that the water "cannot be swallowed easily" and gives her a stomach ache (Interview #86). Others described the water as tasting "salty" or "soapy", and as "similar to the water from Lake Abaya", just a few kilometres east, which they do not regard as a good source of drinking water (Interviews #136, #137). In addition, all the women and girls told me that one of the hand-dug wells, captured in Figure 6.4, is infested with worms and, therefore, is unsafe for drinking. Water from the hand-dug wells is seen also as unsuitable for some household uses: several women explained that vegetables, such as maize and cabbage, changed colour when boiled in the well water and that it left an oily film on the skin if used to wash in. Staff members from the WME office are aware of the women's concerns over the taste of the water from hand-dug wells which tap the shallow aquifer. However, at first, these issues were ignored in the decisions over increasing water supply schemes in the *kebele*. This is discussed further in Chapter 8 where I analyse factors underlying specific decisions.

Figure 6.4 Hand-dug well in lowland *kebele* allegedly infested with worms (left) and running out of water at water point 2, Chinese Scheme, at 9:45am



Source: Author

Because of the serious water quality issues related to hand-dug wells, the Chinese scheme, when functional, is the *kebele's* main water supply. However, there are problems related to management of the scheme which negatively affect peoples' access to water. The Chinese scheme depends on fuel to run a submersible pump that transports water to a reservoir, which feeds the various public and private connections depicted in **Error! Reference source not found..** However, because of the pump's limited capacity, water is pumped only once or twice a day to fill the reservoir. This supply does not match demand and the supply of water at public stand posts often runs out between 9am and 11am. This results in women and girls enduring long queuing times - from 45 minutes to several hours - and the daily uncertainty of whether there will be water when they reach the head of the queue, captured in Figure 6.4, and referred to in Chapter 1, when the topic of this thesis was introduced.

If there is no availability of water from the Chinese scheme after a woman or girl has queued in the morning, there are three alternatives for collecting water: returning to the same post in the afternoon, checking whether one of the hand-dug wells is open, or fetching water from the

woreda town. Travelling on foot and including queuing time, a return journey to the town can take up to three hours; travel by donkey cart involves a higher financial cost.

In addition to the daily uncertainty about supply at the Chinese scheme, some women complained that the scheme's opening hours are unpredictable, that people are allowed to jump the queue, and that the supervisor of the WASH committee abuses his authority and may close the scheme if there are quarrels over queuing. At the hand-dug wells, opening hours are random, and queue jumping is a frequent problem. Several women commented that the hand-dug wells are usually closed when the water points fed by the Chinese scheme are open.

None of the users I interviewed mentions the fees for water as a prohibitive factor related to access. The price for filling a 20 litre jerry can at the Chinese scheme is 0.1 Ethiopian Birr (ETB), and at the hand-dug well, is ETB0.05. However, if the water transported by donkey cart from the *woreda* town the cost goes up to ETB1-2, which is a 10-20-fold increase. (For comparison, under the PSNP, unskilled labourers receive a daily salary of ETB10.) As a result, households in the low and, possibly, in the medium wealth category referred to above, are likely to find it difficult to afford the cost of transporting water by donkey cart.

In addition to these daily uncertainties, the long-term availability of water services in the *kebele* is not reliable. The services are strongly affected by the weak governance of the *kebele's* WASH committee, which is responsible for all the *kebele's* improved water schemes. Committee members explained that there is a high turnover of tap attendants.⁵⁹ The WASH committee accuses them of financial mismanagement, but, because of lack of written records of income and expenditure, and no regular deposit to a savings account, the root of this

⁵⁹ The tap attendant is the person hired by the WASH committee, responsible for opening and closing the water point, managing the queue during water collection, and collecting fees. There are individual tap attendants responsible for each of the water points of the Chinese scheme and one of the functioning hand-dug wells; tap attendants earn a monthly salary of ETB60.

mismanagement is unclear.⁶⁰ As a consequence of the poor financial management, buying fuel and paying salaried staff, namely tap attendants and the scheme operator, is a problem for the WASH committee. Another irregularity is the abuse of roles by WASH committee members. For example, the supervisor, a former *kebele* cabinet member, interferes in tap attendants' decisions about opening and closing water points and imposes his authority on the (female) cashier to get unauthorised withdrawal of funds; the scheme operator, on the other hand, dissatisfied with his low and irregular salary, sells water illegally from an additional, non-public tap at the pump house.⁶¹ As a result of weak financial management and internal governance issues, continuity of service at all three schemes is at risk.

The following main points emerged in relation to access in the lowland *kebele*. The *kebele* residents randomly use all the water schemes available to them, instead of agreeing some division between individual schemes, as assumed in the 'scheme potential' formula in the UAP. Even if all three schemes are operational, households face daily uncertainty about obtaining water, which renders this task time- and energy-consuming. As a coping strategy, households have diversified their strategies using water from improved and unimproved sources. Many use the local river and irrigation channels for watering their animals and for other household chores. According to the *kebele*'s health workers (Interviews #85, #214), 62% of all households have corrugated iron sheet roofs, which they use to catch rainwater. Access to water is particularly difficult during the dry season and in drought periods, when local, protected and unprotected shallow sources dry up. The situation reflects findings from research on MUS (Multiple Use Services) that challenges a black-and-white division between domestic and productive uses for water (cf Van Koppen *et al.*, 2012); and from Ethiopian studies researching patterns of water availability and water needs, which indicate a great diversity of strategies to

⁶⁰ Estimated daily income of ETB80-100 from all schemes combined, is a large sum of money in a context where the basic daily salary of an unqualified labourer is ETB10. The tap attendants' monthly income of ETB60 seems low given the requirement to be present during scheme opening hours, every day.

⁶¹ I am grateful to Tariku Abebe, who highlighted the abuse of these roles among WASH committee members.

access water depending, *inter alia*, on seasonality, livelihoods, or wealth. These aspects were discussed in Chapter 2.

Overall, households are dissatisfied with the situation. Women, in particular, resent the long queuing times and the frequent running dry at the Chinese scheme, and the presence of worms and bad taste of hand-dug well water. They want household connections, which would save them time and energy, a point that men often raised at *kebele* meetings. This request makes sense because the *kebele* is based on a similar settlement pattern to the *woreda* town where many people have private connections, and also because there are already two private connections in the *kebele*. However, because it is classified as a rural area, the *kebele* does not qualify for household connections according to official guidelines. Local officials are aware of this situation. In their descriptions of access, they tend to refer to the experience of local residents, rather than the UAP framing. However, the *kebele* administration and the WME office had yet fully to address the specific scheme management problems.

In light of the daily realities the official access statistics indicating that 70% of the population is covered become rather meaningless. This is even more prominent in the disagreement over the real population figure for the *kebele*. Using the figures collected by the health extension workers rather than official population projections for the *kebele*, the calculation for access stands at 94% based on the 'scheme potential' presented above.⁶² This highlights how the notion of access can become a game of numbers that is removed from the real-life situation.

6.3.2 Notions of access in the highlands

The highland *kebele* I visited has a population of 2,028, living in 313 households. The *kebele* has no access road; it can be reached via foot paths involving a journey of several hours from the *woreda* town, or, in the dry season, by four-wheel drive or motorcycle. Its poor

⁶²When asking about the reason for the difference between the official and the health extension workers' statistics, I was told that official statistics are sometimes manipulated in order to obtain more resources under the PSNP.

accessibility hampers not only the *kebele's* general economic development but also the WME office's communication with WASH committees in the highlands area. The *kebele* is subdivided into five administrative groups: Agaya, Darara, Garo, Iyaho and Mogisa. Among these, Iyaho is the political, administrative and religious centre of the *kebele* and, as discussed below, is privileged in terms of its water supply infrastructure.

Its location in the highlands means the *kebele* is well endowed with springs and has a short dry season lasting only from December to February. The picture in Figure 6.5 exemplifies the abundance of spring water in the area.

Figure 6.5 Abundance of springs in the highland *kebele*



Source: Author

Across the *kebele*, the Garo group, located higher up the mountain, has comparatively low levels of water availability, with no major springs and a water table that is too deep to allow shallow wells. There is a problem with insects in the springs in the surrounding area, which have been the cause of cattle deaths in the past. Across the *kebele*, water availability is poorer during the dry season when most of the small springs dry up and there are long queues at the few perennial water sources.

The water supply infrastructure includes three protected springs feeding four water points in the *kebele*. Table 6.3 presents the administrative groups where water points are located and their functional status. Two of the administrative groups have no protected water scheme in their area, two have one non-functional water point each, and the fifth, Iyaho, has one non-functional water point and the only functional protected spring in the *kebele*.

Table 6.3 Improved water schemes in the highland *kebele*, May 2010

Group	Agaya	Darasa	Garo	Iyaho	Mogisa
Number of households	79	54	38	89	53
Water points	1	-	-	2	1
Funding agency	World Vision			World Vision WB	World Vision
Year of construction	2007			1999, 2010	2007
Status	Non-functional			1 functional 1 non-functional	Non-functional

Source: Information from interviews and author's observations in highland kebele

The functional protected spring serves 30-45 of the 313 households in the *kebele* (Interviews #3, #33, #50, #146). In the rainy season, 10-15% of the *kebele's* residents use water from a protected scheme. This is considerably less than the 50% assumed under the 'scheme potential' calculation for the *kebele*. From interviews with water users - mainly women, and with WASH committee members and local officials - mainly men, the following issues emerged with regard to access in the highland *kebele*.

Among the five administrative groups in the *kebele*, Iyaho is clearly favoured. It is the only group with a functional improved scheme, and the only group with two schemes. Among the 85% of the *kebele's* residents who fetch water from unprotected sources, the Garo group is most disadvantaged. The round trip from Garo to collect water from unprotected sources, is an hour on foot, according to health extension workers (Interviews #135, #196). The former

and the current *kebele* chairmen (Interviews #125, #154), who are elected office holders, and *kebele* staff members (Interviews #10, #38, #67, #135, #196), are acutely aware of the disadvantaged situation of the Garo group in relation to water access. The chairman, concerned about his re-election, expressed fear that people from the other four groups, particularly from Garo, might feel cheated, particularly because households from all groups contributed money and labour for the construction of the only functional protected spring located in Iyaho. The chairman's priority, therefore, is to secure more projects that will also benefit the other groups. However, provision of a protected scheme for the Garo group is hampered by a lack of accessible springs in the area.

Among the 15% of the *kebele* population who use the protected spring, there was general satisfaction with the quality of the water, the service and all the arrangements related to the scheme. The monthly user fee of ETB0.25 was not seen as problematic by any of the users I interviewed (Interviews #31, #33, #62, #143, #191, #220, #221). This sum is only a fraction of the contribution required in lowland areas. In relation to daily water consumption, an important difference emerged between the WHO and Ethiopian minimum standards, and actual use. During the wet season, a household collects a total of 30 litres per day according to health extension workers. This amounts to only 5 l/p/d per person based on the average size of a *kebele* household of 6.5 persons. The small volume, only one-third of the consumption target in the UAP and only a quarter of the volume recommended by the WHO, is explained by the fact that households use this water only for drinking and cooking purposes. The women and girls I interviewed explained that they wash clothes and water animals at small streams, and use harvested rainwater, collected mostly in pots and pans, and unprotected nearby springs, for other household activities. Figure 6.1 exemplifies this, depicting women cleaning vegetables in an irrigation channel. In addition, according to the agricultural extension workers, nearly a quarter of all households have dug their own wells. The water from these wells (which are not classified as improved) is used for domestic purposes, watering animals and irrigating

vegetable gardens. Some farmers with fields at lower levels in the *kebele* divert local springs to provide small scale irrigation. Only beer brewers fetch substantial volumes of water: 80-100 litres per day.

Figure 6.6 Using unprotected water sources for cleaning vegetables in the highlands



Source: Author

Despite the impression of abundant water gained during my field visit, availability varies according to the season. During the dry months, December to February, when water from small springs and shallow wells depletes, fulfilling daily water needs is more cumbersome, and all the *kebele* residents rely on few perennial sources for all domestic purposes including watering animals.

Finally, weaknesses in scheme management have a major impact on access. Two of the protected springs in the *kebele* fell into disrepair almost immediately after their construction, several years prior my visit. According to the WME office, the two non-functional schemes require only very minor repair works. Women living nearby the broken-down schemes were very clear that they wanted them to be repaired, but complained that the WASH committee

ignores their requests, despite one of the women being a committee member (Interviews #220, #221). Their frustration at not being listened to elevates the gender dimension related to access. The token female representative on the WASH committee was unable to convince her male colleagues to take action. Similarly, the female cashier in the lowland WASH committee was unable to stand up against the chairman's abuse of his power and the unauthorised withdrawal of money from the committee account. These examples are illustrations indicative of the deeply entrenched hierarchies and power relations in Ethiopian society, discussed in Chapter 2, which limit efforts to address gender inequalities related to water. According to WASH Programme guidelines, a percentage of WASH committee members and tap attendants should be female (FDRE, 2008: 36). However, in the case I studied, female presence on the committee was not sufficient to change the existing management culture.

In discussions with WASH committee members responsible for the non-functional schemes (Interviews #120, #141, #178) and with *kebele* officials, I was told that the committee is responsible for carrying out repairs. The *kebele* chairman, who admitted that he could bring pressure to bear on the WASH committee, explained that he preferred not to because he needed its political support. The committee members pointed out that they did not receive a salary for their work. The WME office had sent out a technician when one of the schemes first broke down. However, due to lack of support from the WASH committee he was unable to carry out the necessary maintenance work (Interview #162). Again, similar to the problems related to management in the lowland *kebele*, no party was willing to take responsibility for scheme O&M. This is in line with the literature on governance issues, discussed in Chapter 2, related to inadequate operationalisation of post-construction support, in Ethiopia and elsewhere in Sub-Saharan Africa. The unresolved issues related to keeping schemes operational are reflected also in the framing of access as part of the 'scheme potential' parameters of the UAP, which exhibit a supply orientation because they do not take into consideration scheme functionality status.

6.4 Summary of framing related issues

At the international level, General Comment 15 sets a normative framework for access to water supply that includes social, economic, cultural and inter-generational concerns. The WHO provides minimum guidelines for access related to volume (20 l/p/d), distance (within 1km of the dwelling) and water quality. The MDG 7c target sets international benchmarks for monitoring access to water supply, represented by the indicator of use of an 'improved source'. The JMP, responsible for global monitoring of progress towards the water and sanitation-related MDG, measures access to an improved source on the basis of a list of scheme types classified as 'improved'. Because of the focus on technical parameters, namely access described using the shorthand of an improved infrastructure scheme, I interpret the MDG and JMP framings as representing a technical perspective and suggest that the WHO volumetric and bio-chemical water quality standards also fall broadly within this framing.

In Ethiopia, rural water access standards are set by the UAP. The programme makes a distinction between a long-term aspiration and an immediate target for achieving 'universal access'. The long-term aspiration is to provide 15 l/p/d, within 1.5km of the individual dwelling, which I describe as 'volume-distance' parameters. These parameters relate directly to WHO standards, but are a 'watered down' version, with the minimum volume reduced further and the maximum distance to the dwelling much longer. However, the immediate target for measuring progress towards 'universal access' in the country is based on an extrapolation of average beneficiary numbers related to specific scheme types, regardless of their functionality status. I called these the 'scheme potential' parameters. Although the data source in the Ethiopian case differs from the JMP,⁶³ the targets have a common focus on infrastructure. Since both UAP access framings have strong similarities to the WHO guidelines and JMP

⁶³ JMP estimates are based on household surveys whereas MoWR figures are based on reports of scheme types classified as 'improved', a difference I discussed in Chapter 3.

benchmarks, I interpret this as international standards exerting a strong influence on national framings of access in Ethiopia.

In analysing the framings of sector government stakeholders, and donor and NGO representatives in Ethiopia, it emerges that these framings are influenced strongly by national and international framings. A major difference between Ethiopian government and other stakeholders is the point of reference for the two definitions in the UAP. While all government staff members refer to 'access' as the 'scheme potential' parameters closely related to the indicators in the MDGs, NGO and donor representatives cite the UAP 'volume-distance' parameters derived from the WHO standards. When asked about potential shortcomings of these parameters, all stakeholders criticise the official definitions for their shortfall in capturing the situation on the ground. Government stakeholders mainly referred to the inaccuracy of beneficiary estimates in the 'scheme potential' parameters. Donor and NGO representatives, but also government staff, raised problems related to the distance and volume parameters of the WHO-derived target. However, most interviewees did not refer to problems beyond the parameters related to these two framings. The exceptions were staff at *woreda* level who circumscribe access in close relation to their specific responsibilities and professional backgrounds. These findings suggest that there is very little diversity in access framings among sector professionals, and that diversity decreases the further removed are people's responsibilities from the daily realities experienced in rural areas.

A circularity was revealed between the setting of a target for 'access' and the parameters used to measure this target. In the case of the WHO-related parameters, these are volume and distance, under the JMP, parameters are set by the infrastructure schemes classified as 'improved'. As a result, the setting and measuring of objectives in relation with water access tend to be self-referential and, thus, even further removed from other parameters that might be relevant. When comparing the parameters inherent in the two dominant framings with

concrete situations in two specific locations situated in the lowlands and highlands, the pictures that emerge do not correspond neatly with either of them.

The UAP's 'scheme-potential' parameters related to the technical framing of the MDGs gives an access figure of 70% in the lowland *kebele*, and 50% in the highland *kebele*. On closer examination, it appears that despite the higher percentage for the lowland area, accessing water is more difficult there compared to the highlands, where many unprotected sources are available throughout much of the year. This indicates that water availability, from protected and unprotected sources, matters significantly for achievement of access. People cannot be categorised simply as those with and those without access. In reality, people use a mix of improved and unimproved sources, from springs, surface water and groundwater depending on availability and accessibility, whether protected or unprotected. People do *not* always, as assumed in the technical framing, collect water from a single protected source. My findings highlight that 'access' depends on the combined overall availability of water from the different sources, which vary according to the agro-ecological zone,⁶⁴ and demand for water, which depends on livelihoods, wealth and settlement patterns, all issues that are highlighted in the literature on Ethiopia (Calow *et al.*, 2002, Coulter *et al.*, 2010) and more widely (Calow *et al.*, 2010), as discussed in Chapter 2.

An interesting finding in relation to the term 'improved' to refer to the quality of water from hand-dug wells in the lowland *kebele* is that it is used by the JMP as shorthand to indicate a scheme that is likely to be 'safe', in the sense of being of an acceptable water quality standard. However, in my case study, the women I interviewed did not find water from shallow sources acceptable for drinking and had reservations about using it for other household purposes, a point made in studies in other settings, e.g. Mehta (2005) for a case study in India.

⁶⁴ This observation is in line with a growing body of literature on water for crop production (Falkenmark and Rockstroem, 2004) and water in international crop trade (Aldaya *et al.*, 2010), which recognises the importance of green water (soil water originating from rainfall) for ensuring rainfed crop-production in agriculture, for water-related food security.

Taking the volume-distance parameter as a hallmark of 'access' raises further questions. The most prominent is the low level of consumption of only 5 litres of water per person from protected sources in the highlands area. This finding is linked to the reservations expressed by sector professionals in relation to 'access', addressed in Section 6.2. However, in the context of my case study, the consumption of such a small volume becomes understandable because of the presence of unprotected springs that can be used for other purposes than drinking and cooking. However, there is no doubt that during the dry season or in areas with lower overall water availability, low consumption rates from an improved source will become an important issue. With regard to the distance parameter, neither of my case study locations revealed particular findings.

My cases highlighted some other factors affecting 'access'. One was apparent to local stakeholders, but does not emerge from the statistics; this is the unequal distribution of schemes across the five administrative groups in the highland *kebele*. It is possible that there are other examples of the inequities and exclusion that affect marginalised groups and vulnerable individuals. For instance, old and sick people, people with disabilities and also pregnant women, will be less able or unable to carry 20 litre jerry cans of water. These aspects are related, *inter alia*, to the social and power relations inherent in community settings (Agrawal and Gibson, 1999) and to the CBM (Community-based Management) model (Cleaver and Toner, 2006) discussed in Chapter 2.

Another aspect related to 'access', not captured by the above framings, is scheme management. In both *kebeles*, weak management had important repercussions for access. The most obvious examples are broken down schemes that are never repaired thereby foreclosing access. But the long queuing times and daily uncertainties experienced by mainly women and girls collecting water at the Chinese scheme also affected the organisation of the day and reduced access. In the lowland *kebele*, the nearest alternative scheme supplying good drinking

water quality is at a distance of 5km and may not be affordable for poor households in the *kebele*. These issues have been discussed by various authors in relation to CBM (Fonseca and Njiru, 2003, Manor, 2004, Cleaver and Toner, 2006, Jones, 2011).

Although women are the main collectors, carriers and users of water, their views are not given sufficient importance in WASH committees and official *kebele* meetings. My findings, though only illustrative, indicate that a female membership in these committees is not sufficient for women's voices to be heard. The female cashier in the lowlands had no control over the committee's finances. She simply had to carry out the orders of the chairman although this made her uncomfortable. In the highland *kebele*, the female WASH committee member could not persuade her male colleagues to mobilise repair of the protected spring. My cases reflect points made in the wider literature, discussed in Chapter 2, that gender relations in Ethiopia are biased against women. Here, the prevalent culture is tilted towards male perspectives, expressed in the fact that those at the top of a hierarchy in political and administrative structures tend to be men, resulting in the male WASH committee chairman consulting the male *kebele* chairman and male WME office head and taking no account of women's perspectives. This point resonates with findings in the literature that discuss the link between water control, expertise and status in relation with masculinity in irrigation (Zwarteveen, 2008), and with research that highlights the 'tokenistic' character of female representation on WASH committees (Harvey and Reed, 2004) discussed in Chapter 2.

In summary, the contribution of this chapter to the large literature on diverse aspects of 'access', lies not so much in identifying aspects not discussed so far, but rather in highlighting the significant dimensions of access discussed in the literature on CBM, of gender, and of patterns of water availability and water needs, discussed in Chapter 2, which are almost entirely ignored by international and Ethiopian framings used to monitor access. The access story line represented by the two-tiered UAP definition of 'scheme potential' and 'volume-

distance' is narrow and twists reality to accord with a technical perspective. The conclusion from this first angle of my investigation is that the ways in which most sector stakeholders frame 'access' do not capture the diverse notions of 'access' identified in my two case study locations.

7 Tracing the political and power dynamics in monitoring access

Chapter outline

This chapter examines the political and power dynamics involved in monitoring access to rural water supply, specifically, the various actors' rationales. Using process tracing, I explore the rationales for the UAP 'access' frames, and discuss the power dynamics in monitoring processes, that emphasise some framings while neglecting others. Section 7.1 traces the development of the two-tiered definition of rural water access in the UAP, and documents alternative interpretations of 'access' and related rationales among government officials at lower levels of the administration. Section 7.2 examines the access calculation for the 2008 Southern Region WRI (Water Resources Inventory). Detailed analysis of the inputs to and outputs of this appraisal allows me to trace the power dynamics, represented by the intervention of a powerful actor, the Minister for Water Resources, to impose his particular framing on the results of the WRI analysis. Section 7.3 traces less formal monitoring practices at *woreda* level, and explains that both, formalised and less formalised monitoring, contributes to the overall understanding of local water sector officers related to rural water access in their location.

7.1 Rationales for calculating water access

Sections 7.1 and 7.2 focus on a crucial sub-process of PM, the calculation of access to rural water supply in the UAP. Sector government staff at federal, regional, zonal and *woreda* levels, are key actors in this sub-process, and are one of the focuses in this chapter. As discussed in Chapter 6, the UAP has a two-level definition of 'access'. 'Water supply coverage', which I refer to as 'volume-distance', describes access to 15 l/p/d within 1.5km distance from users' dwellings; 'water supply access coverage', which I call 'scheme potential', refers to potential

access based on estimated beneficiary numbers per scheme type. The UAP's two-tiered definition allows space for interpretation, space that is exploited by sector government staff at different administrative levels, when calculating access to rural water supply. I trace how the MoWR arrived at this method of calculation, and then contrast its definition with the methods of calculation and rationales of government representatives in the regional, zonal and *woreda* sector offices.

7.1.1 MoWR's rationale for its calculation to achieve 'universal access'

The MoWR's ambition to achieve 'universal access to rural water supply' in Ethiopia by 2012 is crucial to the rationales for the UAP's access framing. As already mentioned, both the original version of the UAP (MoWR, 2005) and its revision (MoWR, 2009a), are aimed at increasing access to rural water supply from 35% in 2004, to 98% in 2012. This is a much more ambitious target than the MDGs for Ethiopia, which aim at increasing access to water supply to 66% by 2015 (MoWR, 2009a). When the UAP was established, the MoWR had a water sector development programme in place, with the more conservative target of increasing access to rural water supply to 71% by 2016 (MoWR, 2002). The UAP established a hugely ambitious change in aims compared to the previous programme, and also to international targets. Below I trace the developments that led to this shift in access goals.

The UAP was developed in 2004 as part of Ethiopia's poverty reduction strategy, PASDEP, which was formulated so that Ethiopia would qualify for debt relief under the HIPC initiative (Interview #95) to reduce the external debt of poor countries. Development of the UAP, therefore, is closely related to the global aid effectiveness agenda, outlined in Chapter 3. According to a former senior official in the MoWR, who was an advisor to the Minister on the area of the UAP, the idea of 'universal access' came from representatives from the telecommunications sector, during a meeting held to discuss the role of infrastructure in reducing poverty. This former advisor and his colleagues who participated in the meeting,

were keen to attract more funding to the sector and also were inspired by the idea of ‘universal access’ (Interview #95). According to this former advisor, the access targets in the previous sector development programme, a document developed by external consultants, were quite conservative and were derived from past sector trends and future economic prospects. He lobbied for a change to these targets, arguing that the right to water was enshrined in the Ethiopian Constitution and that a more ambitious goal towards achievement of this right was required.

In their investigation of the feasibility of achieving ‘universal access’, the MoWR experts, according to the former advisor, focused on two aspects: first, based on the results of a study indicating that actual per capita consumption of rural water supply in Ethiopia was as low as 5 l/p/d, they decided it would be legitimate to decrease volumetric minimum standards for drinking water from 20 to 15 l/p/d for Ethiopia, and to increase the maximum distance between source and dwelling from 1 to 1.5km; based on a successful implementation of a ‘low-cost’ technology programme in a major region of the country, Oromiya, it was suggested that UAP implementation could rely substantially on low-cost technologies constructed by residents, such as spring protection and hand-dug wells, which could later be fitted with rope or hand pumps.⁶⁵ In the case of the Southern Region, there had shown a significant increase in latrine construction by residents in a short period of time.⁶⁶ According to my informant, these success stories indicated that increasing water access could follow a more positive trend than the existing Sector Development Strategy estimates based on economic projections.

The former senior official’s account of how the access definition in the UAP was arrived at, shows that access parameters were compromised in various ways to fit the instrumental

⁶⁵ ‘Low-cost’ technologies refers to self-supply, the second service delivery model introduced in Chapter 2.

⁶⁶ According to this ‘success story’ (Bibby, 2007) in the Southern Region, the proportion of latrines in rural areas increased from 16% in 2003 to nearly 90% in 2006 based on a strategy of political campaigns combined with outreach work by front-line health workers who persuaded the region’s population to construct low-cost latrines without use of hardware subsidies (Terefe and Welle, 2008). As referred to in Chapter 3, the validity of these figures has been the subject of debate in Ethiopia.

rationale of ‘achieving universal access’ by 2012: the MoWR relaxed the WHO related ‘volume-distance’ standards and opted for reliance on a low-cost strategy. The 2009 revision to the UAP reemphasised this strategy. When explaining his reasons for the low-cost strategy to me, another senior official in the MoWR confirmed the importance of this instrumental rationale within the Ministry. According to him,

If you mobilise the community, the number of schemes you can cover could be quite a lot. Suppose, if you think of hand-dug wells, if you mobilise the community, they have to dig hand-dug wells by themselves; then you save energy, money, and your achievement grows also. (Interview #206)

In other words, this senior Ministry official saw the low-cost strategy as a way of achieving, quickly and cheaply, the target of ‘universal access’. Yacob Arsano and colleagues who carried out a political economy review of the Ethiopian water sector and make the point that the promotion of low-cost infrastructure was seen by some as a “politically expedient measure for cutting government expenditure and ‘boosting’ water coverage figures” (MoWR, 2002, Arsano *et al.*, 2010).

When the draft UAP was debated in the federal Council of Ministers, initially it did not achieve consensus. Those defending the ambition of ‘universal access’ justified it on the grounds of making it easier to achieve the MDGs (Interview #95). In interviews, several senior MoWR officials made similar arguments. The senior official quoted above argued that ambitious targets are good because they help to increase actual achievements, “even if the 100% mark is not achieved” (Interview #206). His colleague, also in a senior position in the Ministry, commented similarly that:

We were not sure whether we could achieve the MDG targets. But we exceeded them. So, if we try, we may achieve 90%. Even if we achieve 80%, who says that this is not an achievement? It is progress, so it’s better to go for higher targets. (Interview #84)

These interview extracts show that the ambitions are very high in the MoWR, but setting ostensibly ambitious targets put the MoWR under pressure to realise them. This pressure is an explanation for why the revised UAP uses the ‘water supply access coverage’ definition or

‘scheme potential’ parameters to report progress towards ‘universal access’ with the already relaxed WHO-guideline based ‘volume-distance’ parameters, referring to medium to long term aspirations.

Soon after the UAP was ratified, it became clear that, even based on the relaxed ‘scheme potential’ standards, the MoWR would not achieve its targets. In interview, a senior official explained that, a consultant employed to calculate access based strictly on all the relevant factors, produced an access figure of just 7.4% (Interview #206) compared with the official MoWR figure of 34.5% access for the year 2004 (MoFED, 2006). This sudden and substantial drop would have been politically unacceptable, and most certainly would have jeopardised the Ministry’s aim of ‘achieving universal access’ within five years. In interview, the same official hinted at the MoWR’s actions in the face of this problem:

the calculation method is that you don’t use the radius or the volume, but the average. But when we are strict, when we use the km [distance parameter], then there is a problem: the coverage would go down, definitely. But we urge everyone that we are going towards that. (Interview #206)

So, in the revised UAP, the ‘volume-distance’ parameters became the long term goal towards which the MoWR was working, but not the yardstick for measuring progress towards ‘universal access’.

Also, the UAP’s ‘scheme potential’ parameters disregard the functionality status of schemes. This parameter has a significant impact on access figures since it is estimated that approximately one-third of all improved schemes in Ethiopia in 2010 were non-functional, as highlighted in Chapter 2. In several interviews with MoWR officials it was explained that functionality is not included in the ‘scheme potential’ calculation because, strictly speaking, government is responsible only for the supply side. In the words, as one of the senior official sources I quoted in relation to the calculation method, told me:

If a hand-dug well is completed and gives service to the community, if a washer is spoiled and the community cannot repair it, it is their problem. ... That is a

management problem. The management problem should not be the burden of the sector. (Interview #206)

This statement typifies the MoWR's attitude to O&M as being the responsibility of the users, in line with the CBM model discussed in Chapter 2. The focus of the MoWR on measuring the supply side reinforces a technical framing that conceptualises water supply, first and foremost, as the provision of infrastructure and not as an ongoing service. Again, there is a circularity between the framing of the methods (here measuring only supply, that is infrastructure regardless of its functionality status), and the framing of the desired outcomes (here access viewed as the provision of water supply infrastructure). The attitude reflected in the above quote can be seen in the lack of institutionalisation of post-construction support, discussed in Chapter 2.

In summary, the UAP targets were set within the context of a general drive towards ostensibly ambitious targets across infrastructure sectors in Ethiopia to make rapid progress towards poverty reduction. Once these targets were in place, the MoWR was under pressure to report progress. The instrumental rationale of adhering to the UAP targets, led the MoWR to manipulate the way it appraised access: by relaxing service standards compared to WHO guidelines, by employing a low-cost strategy, and by reporting access based on 'scheme potential' parameters, which are not based on actual scheme users and take no account of scheme functionality status.

However, there are several indications that the MoWRs' instrumental rationale for achieving UAP targets was not widely shared among sector staff below federal level. For instance, the former advisor to the Minister I interviewed, told me he found it difficult to convince regional BoWRs about these ambitious targets at the time of the UAP negotiations (Interview #95). Another senior government official told me that the UAP was not well promoted below the regional level until 2009 (Interview #84), something that is acknowledged in the second revision to the UAP (MoWE, 2010) and in an MA thesis investigating UAP implementation in

the Southern Region (Amberbir, 2007). Likewise, the low-cost strategy set out in the UAP was not fully operationalised by October 2010 (Interview #206). Next, I explore rationales for calculating rural water access figures at regional and zonal levels.

7.1.2 Clashing rationales over water access calculations

In the Ethiopian rural water sector, PM takes the form of regular reports provided by *woreda* WME offices. BoWRs carry out quarterly review meetings ahead of the federal level meetings to review sector progress. One of the agenda items for the regional sector review meetings is progress reports on water supply access, from zonal WME departments and *woreda* WME offices. The discussions at these meetings provide a context for an investigation of the political dynamics related to calculating access.

The former head of a zonal WME department commented on the political nature of sector review meetings and described how regional, zonal and *woreda* representatives use different types of information as the basis for access figures that best represent their interests. According to him, since sector offices at all administrative levels are bound to the UAP 'scheme potential' calculation method, the biggest leeway for manipulating access figures is provided by their choice of data. Responding to my question about problems related to calculating access in these meetings, he commented that:

The problem is that it has been very subjective. The regional office calculates by projecting water coverage using the 1993 [2000 in the Western Gregorian Calendar] inventory. And we [the zonal office] were using the 1997 [2004 in the Western Gregorian Calendar] inventory. The *woredas* are also using the 1997 [2004 in the Western Gregorian Calendar] inventory but they use actual population figures from their *woredas*. So, we were not using uniform information. (Interview # 211)

He told me that, in 2007, as a result of using different data sources, the regional BoWR reported access for his zone as 69%, the zonal WME department reported it as 27%, while WME *woreda* offices in the zone provided a figure of 12-15%. This former department head also commented on the reasons for using different data sources:

[T]he problem comes when, for the budget allocation, water coverage data is important at the regional level. So, when the region asks for water coverage for a *woreda*, the regional office reports some number. The zonal and *woreda* office will oppose it because the coverage of the regional office is most of the time higher. And this will not help the *woreda* to get a big budget. So the *woredas* and the zone oppose the regional figure. There is always some quarrel in the meeting in this regard. (Interview # 211)

His explanation indicates that the regional BoWR is under pressure from the federal MoWR to report high figures that support a story of successful progress towards 'universal access'. The zonal WME departments, on the other hand, are more inclined to support the *woreda* WME offices. However, there are also tensions within the BoWR between an 'instrumental' rationale to report a positive trend towards 'universal access', and a 'substantive' rationale of providing optimal results for budget allocations to *woredas*. An engineer in the BoWR commented that:

One thing we strongly defend is that, as we increase the [access] figure of the Bureau, the figure of the budget will diminish. It is the main problem - because we should set the coverage of the region so as to get the optimum benefit of the region. Yet, sometimes, for the sake of not being blamed by the minister, they try to increase the [access] data. This is what [pause], it is what I hate. We seriously defend but we can't because it is the order of the Minister's office. (Interview #148)

The BoWR engineer highlights that he and his colleagues are interested in obtaining access figures that will identify which *woredas* are in most need of budget allocations. He complains that the BoWR sometimes manipulates data because of pressure from the MoWR to report high levels of access regardless of the situation on the ground, a point that was confirmed by several of his colleagues at the BoWR (Interviews #168, #169). The BoWR's pressure to report positive trends towards 'universal access' reflects similar pressure provided by upward accountability to the MoWR.

The *woreda* WME offices, on their part, also have an 'instrumental' rationale, but towards a different end. They are interested in reporting low figures in the expectation of increasing their chances of receiving capital budget for water supply. Below, I explore their position in more detail based on my findings from the WME office in my case study *woreda*. While the findings from a single case are not representative, the extracts quoted above indicate that the rationale

of attracting additional funding to their areas is shared more widely among *woreda* WME offices.

7.1.3 A WME office's rationale – calculating to obtain budget

In my case study *woreda*, the WME office had its choice of access calculation method displayed on a poster on the office wall (see Figure 7.1). One of the water engineers in the office had done the calculations in December 2009. The table in Figure 7.1 shows the numbers (91) and types of schemes in the *woreda* and their status – whether functional (49 schemes), non-functional (30 schemes) or abandoned (12 schemes). The poster also provides a 'water supply coverage' (volume-distance) figure of 38.1% for the *woreda*. This should be compared with the regional BoWR's 'scheme potential' figure for the same *woreda* of 58.62%, based on regional WRI data for 2008.⁶⁷

Figure 7.1 WME representation of the water supply situation in its *woreda*, December 2009

Status	Borehole (B/H)	Machine Shallow Well (MSW)	Hand-dug Well (HDW)	Large Spring (LSP)	Medium Spring (MSP)	On-site Spring (OSP)	Total	Remarks
1 Functional	3	20	6	7	8	5	49	
2 Non-functional	5	13	8	3	1	-	30	
3 Abandoned	3	1	8	-	-	-	12	
Total	11	34	22	10	9	5	91	

Water supply coverage 38.10

DEC 30 2009

Source: Author

When I enquired about his calculation method, the WME officer told me that he had calculated 'water supply coverage', or the definition referring to the volume-distance parameters, based on WASH committee estimates of users residing within 1.5km of a (functional) scheme (Interview #96). In other words, not only does this WME office use

⁶⁷ This figure was provided by experts in the regional BoWR.

different data (as explained by the representative of the zonal WME department in section 7.1.2) but also a different calculation method.

When I asked the same WME officer what the term ‘access’ meant to him, he highlighted that the ‘scheme potential’ calculation is not indicative of the realities in his *woreda*, a point frequently made by sector stakeholders and discussed in Chapter 6. He illustrated his view with the example of a hand-dug well, explaining that, according to the UAP’s ‘scheme potential’ calculation, a hand-dug well serves 270 people, but its actual yield may be insufficient for this number or there may be fewer than 270 people living in the area (Interview #96). I interpret his rationale for intentionally diverting from the MoWR calculation, displayed on the WME office wall, as him wanting to capture, as accurately as possible, the real situation in the *woreda*.

However, this WME officer was also focused on obtaining a budget allocation, as shown by the following incident. I observed that, on one occasion, this officer had entered a lower number of schemes in the *woreda* in a reporting format for the WASH Programme, one of the water supply funding interventions in the *woreda*. When I asked his colleague about this lower figure, he said that it might have been reduced in response to rumours that the WASH Programme was soon to be diverted to some other *woredas*. In reducing the numbers for water schemes, he hoped to be able to continue to secure funding in the next round.

7.1.4 Summary of the political dynamics inherent in calculating access

The findings in this section indicate that calculation of ‘access’ to rural water supply depends on the intentionality of the actor framing the appraisal exercise, in this case the calculation method. At federal level, the MoWR’s rationale is to demonstrate a success story and, therefore, it uses its authority to manipulate the calculation method to derive a high access figure. At *woreda* level, one important rationale underlying WME offices’s framings is continuing to obtain budgets for water supply, resulting in their manipulating data to show less

good results. In my case study *woreda*, the WME office also explicitly deviated from the MoWR's calculation method set out in the table displayed on the office wall, which I considered to be a political statement, since it is clearly visible to visitors. In the formal setting of calculation of official access figures, the political dynamics are played out when both parties act to manipulate the appraisal exercise to arrive at a result that furthers their interests and views. Viewed from this perspective, the process of monitoring of access to rural water supply takes on the character of a theatre stage, where different stakeholders enact performances that present a situation that furthers their specific interests. This metaphor, first invoked by Stephen Hilgartner (2000), draws particular attention to this political dynamic. I would highlight here that the *woreda* WME office staff had decided not to follow the calculation rules imposed by the Ministry's directives and were demonstrating defiance to the incumbent, in this case, the Ministry, by prominently displaying their interpretation of 'access' in their *woreda*, visible to everyone entering its office. This small act of insubordination shows that the power dynamics are not completely one-directional in Ethiopia, despite the generally authoritarian character of the regime. In the next section I examine use of power to frame an appraisal exercise, in more detail, based on the Southern Region's 2008 WRI.

7.2 Exercising power by framing access calculations

As explained in Chapter 2, regular reporting on water supply is occasionally checked and updated through inventories. Inventories are an opportunity to correct previous figures and, therefore, are political in nature. Studying the calculation of 'access' under the Southern Region's WRI of 2008 in depth provides an opportunity to investigate the power dynamics in appraisals. My analysis in this section focuses on two aspects related to the appraisal processes discussed in Chapter 4 with reference to the STEPS Centre's Working Paper 3 (Stirling *et al.*, 2007) and Smith and Stirling (2007). First, I study the 'breadth of inputs' by

tracing the different calculation methods used by the data analysis team to calculate ‘access’ based on the data available to them. Second, I analyse the ‘opening up’ or ‘closing down’ of appraisal results as presented in wider governance, by tracing the process of interaction of political stakeholders and the results from the data analysis and the ‘access’ result that ensued from that process. Below, I outline the circumstances that led to the 2008 WRI.

7.2.1 Background to the regional Water Resources Inventory

From fiscal year 2000/1 to 2007/8, the Southern Region’s BoWR reported a continuous upward trend in access to water supply from 31.2% to 64.4% (see Table 7.1). However, as discussed in Section 7.1.2, at quarterly sector review meetings zonal and *woreda* sector government staffs strongly contested this consistent annual increase in access.

Table 7.1 Water supply coverage in the Southern Region from 2000/1–2007/8

Year	Rural	Urban	Total
2000/1	29.4%	52.7%	31.2%
2001/2	32.4%	52.9%	33.9%
2002/3	33.1%	58.4%	35.1%
2003/4	41.5%	71.3%	43.9%
2004/5	45%	60%	48%
2005/6	-	-	53%
2006/7	-	-	58%
2007/8	-	-	64.4%

Source: BoWR (July 2009)

According to the former Head of BoWR, the debate escalated in 2007/8, a period when there was very low rainfall, which the residents of the lowland *kebele*, discussed in Chapter 6, referred to as a drought year. While rural and urban regional access figures combined were officially reported as 64.4% (see Table 7.1), over 50% of the regional population were judged to be in urgent need of water, and the BoWR implemented emergency operations to transport

water to communities in tankers (Interview #144). In response to the precarious situation and disputes over official access figures, the regional president requested a WRI to obtain a more reliable picture of the water supply situation in the region. He allocated a separate budget to it and he chaired the inventory process (Interviews #144, #168, #169). The president's proactive role in the WRI indicates that he took the matter seriously. I interpret it as related to a 'substantive' rationale for requesting the inventory in order to obtain a better understanding of the water situation in his region which would help him to address current water supply shortfalls.

The WRI is an inventory of existing improved water supply schemes in the Southern Region and of potential areas and sources for future schemes. With regard to existing schemes, the data collection form contains questions on 17 parameters related to the production and consumption of water from improved sources, designed to calculate access based on the UAP 'volume-distance' and also the 'scheme potential' access definitions (BoWR, 2008). For example, the questionnaire asks for information about how many users - from within and beyond 1.5km - are registered at each scheme, what volume it yields, its functionality status and various other factors. The WRI data collection format is organised around the UAP access parameters and is related to water supply schemes and the technical reasons for scheme failures; it does not ask for information on the experience of individual users or management issues. Therefore, I consider the overall perspective of the WRI broadly as representing a technical perspective, which is in line with my discussion of framings in Chapter 6.⁶⁸ Within this technical perspective, however, the WRI data cover a diverse set of aspects to analyse the UAP access notions from different angles.

⁶⁸ The WRI data collection format was developed in a regional workshop that included various development partners. The format's parameters are derived partly from baseline inventory formats used by UNICEF.

7.2.2 Breadth of WRI analysis

After aggregation of the WRI data, the BoWR set up a team of six regional experts from among its staff members, to conduct data analysis. The immediate concern was to analyse information responding to access questions, to inform the next regional budgeting round; thus, only data deemed relevant for this calculation were entered on the excel sheet for data analysis (Interview #168). Based on interviews with members of the team (Interviews #148, #168, #169), in two draft versions of the WRI report, and a PowerPoint presentation by the team to the Minister of Water Resources, I found that the data analysis team used four different calculation methods, which, along with their results, are presented in Table 7.2.⁶⁹

Table 7.2 calculation methods used by BoWR data analysis team and their results

Calculation Method	Rural	Urban	Total
Method 1: Ernst & Young ¹	12.5%	21.7%	13%
Method 2: quantity-distance ¹	21.5%	43.1%	23.7%
Method 3: total users ¹	31.8%	68.3%	35.5%
Method 4: scheme potential ²	No data	No data	53.9%

Sources: ¹BoWR (June 2009), ²BoWR (2009a)

The first of the team's methods was based on principles developed in an earlier report resulting from a consultancy with Ernst & Young, documented in the BoWR (2008) data analysis guideline. This method takes into account a wide range of factors including how much the scheme yields, population figures, and other factors affecting water consumption such as differences in water availability in relation to Ethiopia's agro-ecological zones measured via temperature and altitude, and the scheme's reliability, that is, its functionality. The 'Ernst & Young' method resulted in a very low rural water 'access' figure for the region: 12.5% (BoWR,

⁶⁹ I renamed the calculation methods to distinguish them more clearly and to highlight to which UAP definitions they referred. In the original reports, these methods were called: method 1: total supply coverage; method 2: total access coverage within 1.5km and 0.5km radius; method 3: total access coverage; and method 4: access coverage.

June 2009). This method was later dropped and is not used in the final draft versions of the team's report (BoWR, July 2009) or in a later presentation by the data analysis team to the Minister of Water Resources that I discuss in Section 7.2.3.

The second method, which I call the 'volume-distance' method, intended to determine access, as much as possible, along the 'volume-distance' parameters of the UAP. This method involved the team adding up the numbers of users reported as residing within 1.5km of a functional scheme. Data on the yields were not used by the team to calculate the 'volume' parameter. Although I did not ask explicitly about why this was the case, there are strong indications that it was because the results were not considered reliable:⁷⁰ using the 'volume-distance' method, rural 'access' increased to 21.5% (BoWR, June 2009).

In the third method, which I call 'total users', the data analysis team included scheme users from beyond 1.5km in the method 2 calculation. This resulted in 31.8% access for rural areas in the region (BoWR, June 2009).

In the fourth method, which I call 'scheme potential', the team calculated 'access' based on the UAP's 'scheme potential' formula, which estimates population served based on average beneficiaries per scheme type, the official access calculation method of the UAP. According to this method, access for the rural and urban population combined is 53.9% (BoWR, 2009a).⁷¹

In their report and their presentation to the Minister, which I discuss in more detail in section 7.2.3, the data analysis team elaborated on the advantages and disadvantages of each calculation method. In particular, the data analysis team's presentation highlighted that Method 4, based on the UAP 'scheme potential' parameters, has a number of limitations: the analysis is not based on actual user data, the standard population assumed to be served per

⁷⁰ Several interviewees noted that the data they obtained on yield of schemes was poor and the team also noted this weakness in their report (BoWR, June 2009).

⁷¹ This figure was subsequently amended to 51.59% based on new scheme capacity estimates provided by MoWR after the data analysis team had presented the inventory results to the Minister

scheme is not based on the scheme's actual capacity, and volumes consumed and user distances from schemes are not verified (BoWR, 2009a). A key result in the report is that scheme non-functionality, recorded as 27% in the region, is a major factor reducing regional 'access' (BoWR, June 2009: 13). The report also highlights inequalities between different *woredas* and *kebeles*, an aspect not captured by regional aggregate figures, and that shallow hand-dug wells and small protected springs, although low-cost, are not sufficient to satisfy local demand (BoWR, June 2009). In their presentation to the Minister of Water Resources, the team recommended Method 2, which refers to the 'volume-distance' notion of access in the UAP. The reasons given for their recommendation were that this method is based on actual user numbers, and because it most adequately satisfies the UAP's minimum access to water requirement of a distance of less than 1.5km of the household's dwelling (BoWR, 2009a).

When analysing the access calculation process from the point of view of 'breadth of inputs' in appraisals, the following factors emerge. Within the technical perspective, which characterises the WRI, the regional data analysis team demonstrated strong agency in line with Michael Lipsky's (1980) work on street level bureaucrats. The team used the parameters available to them to broaden the inputs into the analysis, by employing four different calculation methods. Among these methods, the 'Ernst & Young' parameters go far beyond the typical indicators used in the water sector to measure access. The team's assessment of the advantages and disadvantages of the different methods documented in their report, and in the presentation I discuss below, indicates that they pursued a 'substantive' end; they were interested in capturing, to as great an extent as possible, the water supply situation in the region. In their report, the team concludes that non-functionality is a major factor impacting on access, a result that responds directly to the original objective of the WRI to uncover why official sector reports show a positive access trend while there continued to be reports of water scarcity in the region.

However, the omission of the 'Ernst & Young' calculation method from the team's later draft report also indicates that the team closed down their analysis. I interpret this in the sense of Lukes' (1974) second dimension of power, which holds that actors suppress their preferences to conform to the status quo. In this case, the data analysis team probably dropped Method 1 from the later draft versions of its report and from its presentation to the Minister, in the expectation that the 12.5% access number would not be politically acceptable.

A final point emerging from analysis of the breadth of inputs into appraisal, is related more generally to the politics of knowledge production underlying PM. The wide disparity between the highest and lowest access figures for water access, based on same data using four different calculation methods (13% to 53.9%)⁷², suggests that a definitive picture of PM may be elusive. The above emphasises again that the measuring of a phenomenon (in this case access) depends crucially on the different framings of interpretations. This observation supports the understanding of knowledge production as socially constructed rather than being a linear, uniquely objective process. In this case, the four different methods used help to illustrate that PM can be seen as representing an abridged story of access. The full stories told by each method convey divergent pictures of rural water access in the Southern Region.

Next, I analyse the closing down and opening up of appraisal results to governance in relation to the WRI.

7.2.3 Closing down WRI results to governance

When the federal MoWR was made aware of a drop in access from 64.4% to 35.5% for the Southern Region, based on the results of the regional WRI, it reacted by rejecting these results. A delegation, led by the Minister, travelled to the region to resolve the situation. The BoWR data analysis team mounted a presentation to the Minister in which they described their calculation methods as explained above (except for Method 1 which was based on 'Ernst &

⁷² I am using the access figures for rural and urban water combined here as I did not obtain a disaggregated figure for rural water access for Method 4.

Young' parameters). In line with their view of the relative strengths and weaknesses of each method, the team recommended Method 2 relating to the 'volume-distance' parameters of the UAP method (BoWR, 2009a). However, the Minister insisted on Method 4, the UAP's method to calculate 'scheme potential'. According to one of the data analysts present at the meeting, the Minister argued that Method 4 was simpler than the other methods (Interview #168), while another data analyst present at the meeting, said that the Minister acknowledged that:

scheme potential has vast limitations and does not directly address the exact coverage of the area, rather it tells you what is the potential of the scheme whether there is a beneficiary there or not. (Interview #148)

Despite this recognition, the Minister was not willing to accept other data analysis methods proposed by the experts from the BoWR. Instead, he sent the BoWR an official letter confirming the parameters of 'scheme potential' as the official method to be used in the future. Despite the Minister having imposed his will on the BoWR, the MoWR continued to reject the regional figures, possibly because a drop in access for the region from 64.4% to 51.59% (based on the 'scheme potential' calculation method) was politically not acceptable. The MoWR argued that this rejection was based on poor data collection. However, the regional Bureau Head considered that data collection had been better than for previous inventories and provided "more reliable and acceptable" figures (Interview #144), a view shared by other regional, zonal and *woreda* staff and non-government representatives to whom I talked. According to the regional experts involved in the data analysis, the official calculation method was "forced on them" (Interview #148) by the MoWR and "not that much satisfactory" because it counts "potential schemes" (Interview #169). The regional cabinet, which originally had commissioned the WRI, did accept its results. According to the former head of the BoWR, the main issues discussed in the regional government were related to sustainability, i.e. keeping schemes functional (Interview #144).

This analysis of the Minister's intervention shows how a powerful actor, here the Minister, can 'close down' appraisal outputs in order to justify 'instrumental rationales'. I interpret the Minister's insistence on the calculation method as reflecting an 'instrumental rationale' behind the push for progress towards the sector goal of 'universal access', driven by a desire to show evidence of positive developments in the sub-sector.⁷³ The Minister used his positional power to impose a particular – positive – calculation method, an indication that, in the case of this formal PM exercise, the direction of accountability was upwards in the hierarchy, with the form of calculation driven by political pressure from the Federal level. The process of 'closing down' the WRI results to the 'scheme potential' parameters as a representation of access can be interpreted as an act of stage management. In this particular act, the 'scheme-potential' notion of access is presented as 'truth'. The interpretation of performance as being stage managed, is reinforced by the Minister's acknowledgement of the limitations related to the 'scheme potential' calculation method.

However, my findings suggest also that, despite pressure for closure to this particular result, the same appraisal was also 'closed down' to alternative results reflecting more 'substantive rationales'. In the case of the WRI, the Southern Region Cabinet acted independently of the Federal Minister, to use results to serve a more substantive imperative. Rather than simply supporting prior political aims, the objective was to achieve a substantively improved understanding of problems relating to rural water access in the region, indicated by an important part of the discussion of the WRI in the regional cabinet, focused on the high non-functionality rates across rural water schemes in the region.

Outputs from the same appraisal process can be used simultaneously to 'close down' different results, presented within wider governance discourse. This is another signal that appraisal, i.e.

⁷³ As discussed above, WME offices had a different purpose in their instrumental rationale: they were interested to present a low access figure in order to have a stronger case for obtaining capital and operational budgets.

the WRI, was not a logical linear exercise, but was subject to political pressures that variously accommodated the interests and perspectives of different actors. In order to understand the degree and manner in which an appraisal exercise is closed down to wider governance processes, my findings suggest that more attention should be given to the rationales and actions of diverse individual actors. These may be separate from of the formally stated rationale or imperatives driving the exercise as a whole. In the case of the WRI, it was important for the closing down to alternative appraisal results, the emphasis on high non-functionality rates, that the regional government was interested to find ways for improving access across the region. In Chapter 8 I explore the factors affecting decisions about access and discuss the use of the inventory results at the regional level in more depth. In Section 7.3 I investigate informal monitoring activities in the sector.

7.3 ‘Tacit’ monitoring activities

As described in Chapter 1, by ‘formal’ monitoring activities I refer to monitoring procedures aimed at measuring performance, which are codified, for example, in a manual or a data collection format, and which follow procedures established at a higher level than individual WME offices. In addition to fulfilling formally codified monitoring obligations, actors are involved in monitoring activities with varying degrees of formality, such as through verbal exchanges or adoption of procedures that have not been formally established. In this section, I draw attention to parallel monitoring practices of a varying degree of formality, and how their combination builds to form a body of knowledge that informs decisions. What becomes again clear in this section is the high degree of agency of street level bureaucrats (Lipsky, 1980), here WME officers, who, to a degree, ‘make’ policies rather than merely implementing orders.

7.3.1 Additional aspects considered in the inventory exercise

In my case study *woreda*, four experts from the WME office were engaged in data collection for the WRI, the subject of the discussion in Sections 7.1 and 7.2. In the course of the data gathering in order to complete the inventory questionnaire, these experts collected other information on water access, which was informative for their work. One of the junior team members, an electro-mechanic, explained that, for her, the inventory was important because it allowed her to familiarise herself with different types of engines, and some of the reasons for their breakdown, and enabled personal contact with WASH committee members (Interview #202). Her appreciation of the opportunity to visit different scheme sites was echoed by WME officers involved in collecting data for the National Water WASH Inventory in 2010. These WME officers saw the exercise as a valuable opportunity to study and assess a wide range of aspects beyond those that were part of the inventory. One of the most important things for them was being able to see which water points had WASH committees, how much these committees were trusted by users, and how repairs were managed. They also used the interaction with WASH committee over the scheme inventory as an opportunity to follow up on some of the problems they observed, such as poor sanitary conditions at the water point, or children being allowed to play with hand pumps.⁷⁴

The comments made by the WME officers showed that other dimensions of access were assessed and related feed-back was provided during the process of completing the inventory questionnaires. These contacts and assessments serve also to establish relationships with various stakeholders, including WASH committees and *kebele* officials and staff, but also water scheme users. In Ethiopia, scheme inventories are the only budgeted opportunity for WME officers to collect primary data on water supply schemes. However, these inventories are only

⁷⁴ This information was offered by *woreda* WME officers at a workshop in Addis Ababa that assessed the use of the National WASH Inventory in May 2011. Some of these points were captured in the workshop report (Welle and Bostoen, 2011).

a part of the monitoring activities carried out by WME officers. In Section 7.3.2, I explore the day-to-day monitoring activities encountered during my fieldwork in the case study *woreda*.

7.3.2 Day-to-day monitoring practices by the WME office

In 2010, at the *woreda* level, there was a reporting format, but no specified procedure or budget line for monitoring water supply access. As explained in Chapter 2, the reporting format focuses on the progress of activities during the project implementation cycle, and on scheme rehabilitation works carried out (BoWR, 2009b). A second format captures the numbers of functional and non-functional schemes in the *woreda*. However, monitoring activities to provide this information depends on the initiative of individual WME offices, and monitoring practices likely differ across *woredas*. None of the monitoring activities I describe in this section are supported by a dedicated regional budget or codified procedure for sector monitoring.

During my visit to the *woreda*, I recorded a range of monitoring activities carried out by the WME office. According to the WME technician, one of the WME office's strategies was to request updated information on scheme functionality and on WASH committees' savings, by a letter sent to *kebele* administrations and WASH committees. Another strategy was conducting follow ups with WASH committees in *kebeles*, en route to a scheme that needed repair. He also made enquiries among local artisans in the highland areas about scheme functionality in these less accessible locations (Interview #162). The WME office's community mobiliser, checks WASH committees' savings accounts and financial reports whenever he passes through a *kebele*, using the rules and formats introduced by the WME office in 2009 (Interview #166). The WME office may contact *kebele* administrations by phone, and during chance meetings between WME staff members and WASH committee members, for instance on market days, they discuss scheme-related issues (Interview #179). WASH committee members and *kebele* officials visit the WME office, or call or write to report scheme failures or other problems. For

example, officials from the lowland *kebele* I discussed in Chapter 6, regularly visited the WME office to complain about the non-functionality of the Chinese scheme, the poor water quality at hand-dug wells, and about the high costs incurred when buying water from the *woreda* town (Focus Group Discussion #1, #2).

Based on data on scheme functionality obtained via the ways described above, the WME office continuously updates its scheme records. These office records act as guidelines for weekly and monthly maintenance schedules devised by the office technician and his colleagues on the O&M team.⁷⁵ The WME office was planning to conduct refresher courses for water committee members to improve their financial management and technical maintenance skills, strengthen ties with them, and provide incentives for good O&M practices (Focus Group Discussion #2).

The description of monitoring practices indicates that the WME office has developed a diverse range of monitoring and feed-back channels regarding water supply in the *woreda*, which involve *kebele* staff and officials, and WASH committee members. The key points of reference for the WME's monitoring activities are the *woreda* water supply schemes and the WASH committees managing them. In particular, the WME office monitors functionality and manages the financial management practices of the WASH committees. Other framings that relate to experience of access among individual users, mainly women and girls, such as long queuing times and queue jumping, are not monitored closely. The monitoring areas described by individual WME officers are related closely to their individual roles and responsibilities. For example, the technician was particularly concerned about technical maintenance of schemes, while the community mobiliser was focused on financial management issues. The areas they monitor correspond also to their individual framings of water access analysed in Chapter 6. This confirms the observation made in Chapter 6 that there is a circularity between the

⁷⁵ The former WME office head also explained that the recent introduction of O&M procedures within BPR (Business Process Reengineering) had helped to clarify responsibility for maintenance between the *woreda*, zonal and regional sector offices, and this was speeding up response times from the higher administrative levels to reports of scheme breakdowns filed by the *woreda* WME office (Interview #179).

framing of a problem, and the methods to assess that specific problem. It appears that WME staff members assess access problems based on their experience and professional background. The issues identified become part of their future monitoring activity, such that the problem framing and monitoring cycles continue to follow similar patterns.

I complement the monitoring practices described above with an overview of the inventories and studies carried out in the *woreda* since 2000, when responsibilities related to domestic water supply started to be devolved to the *woreda* level. Based on interviews with sector representatives in my case study *woreda*, I trace how, over the years, staff members have built a substantial body of knowledge on local water supply access.

7.3.3 Building a local body of knowledge on water access

In the first years of the 21st century, when the first water sector representative was employed in the *woreda*, the total number of water supply schemes was unknown (Interview #166). In 2004, when the number of water employees had reached three officers, the BoWR organised its first Water Supply Survey.

Table 7.3 Water scheme inventories carried out in the case study *woreda* between 2004 and 2010

Inventory name	Data collection date	Total scheme numbers
BoWR Water Supply Survey	June 2004	54
RiPPLE Sustainability Study	April 2007	70
RiPPLE Equity Study	May 2008	79
BoWR Water Resources Inventory	June 2008	84

Sources: Interviews #96, #179, Abebe and Deneke (2008), Abebe et al. (2010)

Between 2004 and 2006, funding from various sources for water supply and sanitation interventions started to arrive in the *woreda*, including an action research programme, called RiPPLE, introduced in Chapter 5. Within this programme, a number of studies were conducted,

including two water scheme inventories, a ‘sustainability study’ implemented in April 2007, and an ‘equity study’ carried out in May 2008 (see Table 7.3). The sustainability study investigated the causes of poor scheme functionality in the *woreda* (Deneke and Abebe, 2008). Water sector staff members collected detailed information on every scheme and led focus group discussions with WASH committees on issues affecting the sustainability of schemes. According to the former WME head this study “woke up the office” (Interview #179). According to him, the lack of sound financial management of WASH committees emerged as a major factor negatively affecting scheme functionality, particularly at deep wells that required fuel to operate, which required ongoing management of income and expenditure. With support from RiPPLE, sector staff carried out training for all WASH committees in the *woreda*, and introduced rules and formats for financial management (Interview #166). The sustainability study revealed also that – contrary to the assumptions of sector staff members – WASH committees often did not report scheme breakdowns to the WME office. As a result, actual non functionality rates in the *woreda* were much higher than previously assumed by sector staff (Interview #162).

The following two water scheme inventories, one an input into the RiPPLE equity study (Abebe *et al.*, 2010) carried out in May 2008⁷⁶, and the region-wide WRI carried out in June 2008, had a less important impact in terms of increasing the WME office’s understanding of the water supply situation in their *woreda*. However, both inventories allowed helped the WME office to accumulate experience and build relations with WASH committees. For instance, as discussed above, the inventories provided an opportunity for junior staff members to familiarise themselves with the water supply situation in the *woreda*. Furthermore, as explained in Section 7.2, the regionwide WRI involved a survey of unprotected springs that might be developed into improved water supply schemes. This part of the inventory was as an

⁷⁶ Although focusing on equity in the distribution of unprotected water resources for small scale irrigation activities, the study also included a survey of improved water supply schemes.

important reference for the WME office's planning during the time of my visit in May/June 2010. In Chapter 8, I discuss how this accumulation of a detailed body of local knowledge on water access supported the WME office's related access decisions.

By collecting data for various scheme inventory studies, WME office staff gained an increased understanding of the factors determining rural water access in their *woreda*. Among the many insights gained by the WME office, I noted three aspects that represent particularly important contributions to their body of knowledge on the local access situation. First, inventories provided sector staff members with a bird's eye view of the water supply infrastructure in their *woreda*. Second, inventories gave the office an opportunity to renew relations with WASH committees and other local stakeholders, which increased feed-back loops via the various monitoring channels described in Section 7.3.2. Third, the sustainability study highlighted some previously ignored factors related to maintaining access, i.e. the importance of good financial management, particularly to enable schemes that operate on fuel.

Overall, this section has highlighted that WME officers gradually and continuously built up their knowledge related to the rural water access situation in their *woreda*. The PM information codified in sector reporting formats and collected during inventory studies represents only a fraction of the body of knowledge explored in this section. Much of the knowledge held by and acted on by WME officers (see more detail in Chapter 8) is tacit knowledge, referred to in Chapter 4. The findings on the various monitoring activities at *woreda* level confirm the notion prompted by the findings presented in Section 7.2, that several monitoring processes of varying degrees of formality proceed in parallel. In other words, monitoring is not, as presumed by the linear model of PM, based typically on a singular, linear process.

7.4 Power dynamics in monitoring, and the framings that dominate

In this chapter, I used process tracing to explore the political and power dynamics underlying the calculation of rural water access, a central aspect of PM in Ethiopia. I showed that, in the case of the MoWR and my case study *woreda* WME office, the calculation of access is driven by an instrumental rationale to achieve a particular end. The MoWR changed the minimum criteria determining access and the parameters for its calculation, to portray a positive trend towards achieving ‘universal access’ to water supply in Ethiopia. The WME office deliberately chose parameters for calculating access that portrayed less progress, in order to increase the chances of further budget allocations for water supply interventions. These findings, that is, the strategic choice over the data and methods for calculating access made by these actors, demonstrate that PM is subject to political dynamics. It is not, as assumed in the linear PM model, a neutral and uniquely objective exercise. My findings also confirm observations from Michael Lipsky on street-level bureaucrats. He argues that street-level bureaucrats have a considerable degree of agency in policy processes through their exercise of discretion in day-to-day policy decision making (Lipsky, 1980).

When studying an appraisal process in depth, as I did in the case of the access calculations in the 2008 WRI, it becomes clear that power relations play an important role in monitoring dynamics. Powerful actors, the Minister in the case researched here, are able to impose their framings on appraisal exercises; in the case study in this chapter, the Minister ‘closed down’ the WRI results by dictating the UAP calculation method as the official method of determining access in Ethiopia. These findings highlight again that in the case of rural water access in Ethiopia, PM does not represent a rational way to arrive at a robust result, but rather is subject to framings that are driven, at least in part, by powerful actors’ rationales. When a powerful actor manipulates an appraisal process to justify particular ends, PM takes on the character of a ‘staged’ performance, displaying a subjective representation of reality manipulated by the framings of powerful ‘actors’. At the same time, the regional cabinet, in accepting alternative

outputs of the WRI, 'closed down' the inventory outputs to different results (highlighting the high rate of non-functional schemes), which led to a related social commitment (a budget increase for scheme maintenance in the region), an example of a 'substantive' rationale. However, both results frame access based on a technical mindset.

Chapter 7 demonstrates also that monitoring dynamics are not limited to a singular, formal exercise, but may involve multiple processes, with various degrees of formality, that proceed in parallel. On the one hand, the same topic can be discussed in contrasting ways, and with diverging conclusions, as shown in the case of the alternative outputs resulting from the WRI, as presented to the Minister and in the discussion in the Southern Region's Cabinet. On the other hand, I have shown that codified monitoring activities, such as inventories, also involve additional assessments, which, although not officially documented, contribute to a more nuanced understanding of water supply access, particularly at the *woreda* level. A combination of the various monitoring activities at the local level highlights alternative framing dimensions in the UAP. In my case study *woreda*, one alternative is the aspect of financial management of water WASH committees. However, here also, the focus is largely on the technical aspects of O&M, where the main points of contact for the WME office are WASH committee chairmen and *kebele* officials and staffs. In parallel, individual user perspectives, particularly those of women and girls and vulnerable individuals and marginalised groups of people, are not well represented in the alternative framing dimensions of the WME officers. Even when a scheme is functional, people's levels of access can vary widely, depending, for instance, on queuing times, or uncertainties related to too high demand for water, as described in Chapter 6 in relation to the Chinese scheme in the lowland *kebele*. These alternative perspectives continue to remain largely hidden and excluded even from the more diverse framing dimensions of WME staff members at *woreda* level.

Chapter 8 examines the factors affecting decisions related to water supply access. I look specifically at the role of PM results, namely UAP access figures, and other of the results presented in Chapter 7, in decisions on water supply.

8 Dynamics of rural water access decisions

Chapter outline

This chapter investigates the explanatory power of PM results in decisions on rural water access in Ethiopia. I am interested, in particular, in the mechanisms that lead to access decisions and understanding the specific role of PM results in this activity. Of course, ‘decisions’ on rural water ‘access’ encompasses a range of possibilities. The logic within RBM assumes that PM informs sector budgeting and planning; hence, I investigate these two aspects in Sections 8.1 and 8.2. In Section 8.3, I examine the factors leading to two specific decisions: a water supply budget shift from the lowlands to the highlands in my case study *woreda*; and repairs to the Chinese scheme discussed in Chapter 6. In Section 8.3 the method of process tracing is again central and is employed to examine whether the role of PM among the different factors affecting two water-related decisions, was necessary, sufficient, or merely contributory.

8.1 Factors affecting budget allocations for rural water supply in Ethiopia

A key assumption in relation to PM in RBM is that there is a single stranded feed-back loop between PM results and decisions taken. This is referred to in OECD jargon as the ‘results chain’. When applied to the rural water sector, the logic of the results chain holds that monitoring results inform future budget allocations and strategic sector planning. In the literature on RBM implementation, discussed in Chapter 3, even in OECD countries the relation between results-based information and budget processes is characterised as weak (Sandahl, 1997). From this it follows that, in highly aid dependent countries with complex sector financing arrangements, the link between monitoring results and budgeting decisions is likely

to be even more fragile. Despite this, the link between results-based information and budget allocations is emphasised by sector stakeholders.

Ethiopia is such a country. A report entitled *Water Supply and Sanitation in Ethiopia. Turning Finances into Services for 2015 and Beyond* (WB, 2010b: 16), finds that “rural water supply in particular is supported by almost every conceivable combination and permutation of development assistance”. In this section I expose some of the most significant of these ‘permutations’ and demonstrate how they weaken the assumed results chain between monitoring results and budget decisions in Ethiopia. Note that my discussion refers to the situation in the Ethiopian financial year 2009/10, the time of my field visit. Since then, the sector has harmonised some of the financial modalities I describe below.

8.1.1 Overview of financing modalities for rural water supply (2009/10)

An important and complicating aspect of water supply and sanitation related funding in Ethiopia is the dependency on foreign assistance. According to a recent Joint Budget Aid Review (MoWR, 2008a: 8), in 2006/7-2007/8 average Federal Treasury sources amounted to less than 50% of the total sector budget for water supply and sanitation. Other sources of funding for the sector are multilateral and bilateral donor assistance and NGO funding.⁷⁷

The 2009 Public Finance Review of Ethiopia (WB, 2009) represents the most comprehensive effort in Ethiopia to provide an overview of the different financing mechanisms for rural water. The review identifies eight different ways that financial resources are allocated to rural water supply interventions, under three financing ‘channels’ (WB, 2009: 55). These channels (Channels 1, 2 and 3) are distinguished by their relation to the Ethiopian budgeting and expenditure system. Channel 1 funding flows directly through the Ethiopian budgeting and expenditure system via the Ministry of Finance and Economic Development (MoFED) and its

⁷⁷ Prospective users also contribute up to 5% of the construction costs in cash or in kind, and are expected to cover scheme O&M costs. However, their contributions are not captured consistently in sector financial documentation and, therefore, are not differentiated here.

representative offices at lower administrative levels. Channel 2 uses special accounts set up within Ethiopian line ministries, and Channel 3 funding is made up of project aid flowing directly from bilateral donors and NGOs to beneficiaries, with no Government of Ethiopia (GoE) involvement (WB, 2009: 55). Based on available financial sector data in 2010, comparison of the magnitude of different funding sources is very tentative. The above cited Public Finance Review provides an overview of foreign funding sources organised by financing modality, based on a minimum three year average of budget allocations (WB, 2009: 55). According to these figures, Channel 1 funding included approximately 53% of foreign aid, Channel 2 accounted for just below 42% and project aid under Channel 3 was equivalent to approximately 5%. It is important to note here that there is no overarching mechanism for allocating budget to this sector, which is one indication of the complications inhibiting a clear link between PM and budget allocations for rural water. Section 8.1.2 outlines the factors affecting the budget allocations under each channel, and discusses the role especially of monitoring results.

8.1.2 Factors affecting budget allocations under Channels 1, 2, and 3

Channel 1 financing is divided between Channel 1a, which is the financial resources controlled by Ethiopian Treasury rules, and Channel 1b, which is financial allocations from donor programmes to the sector that are earmarked for rural water supply.

Channel 1a refers to the government's own budget allocation to rural water supply. However, due to Ethiopia's decentralised governance structure, the sector's UAP is not supported by a direct federal budget line. Channel 1a includes multi-sector intergovernmental transfers to national regional states, zones and *woredas* via general and special purpose 'block grants', as explained in Chapter 2. The rules for the distribution of block grants, specified in the 'New Budget Grant Distribution Formula', do not specify allocations to particular sectors. This budget formula, which was introduced in 2009, takes account of population size, relative

revenue raising capacity, relative expenditure needs, and performance incentives (Arsano *et al.*, 2010: 13). So, rather than allocating funding directly against specific UAP targets, the Ethiopian government allocates its financial resources according to this formula.⁷⁸

A proportion of the 'block grant' funding is allocated to the regional government, the remainder being channelled to lower levels - in the Southern Region to zonal and *woreda* governments. Part of the regional block grant goes to the BoWR in line with the above budget distribution formula, which, in the fiscal year 2008/9, amounted to ETB80 million (Interview #4). As a result of the division of labour between regional and *woreda* sector offices outlined in Chapter 2, the regional budget caters only for the construction of large, often multi-village schemes, and major rehabilitations. Since the investment costs of a multi-village scheme can range from ETB10-30 million, it can be seen that the contribution of the total regional capital budget for water supply investment is rather small.

At *woreda* level, the bulk of block grant allocations in the past went on salaries and operational budgets, not capital investment (Aboma, 2009: 9, Alemu and Thomas, 2009: 9). This has significant repercussions for the water sector, where large capital investments are needed to construct infrastructure, and does not compare with the other basic services of health, education and agriculture, where a higher proportion of the budget is allocated to recurring costs (Welle *et al.*, 2009).

One reason for the lack of capital budget for rural water supply at the *woreda* level is that *woreda* governments often have budget deficits and struggle to cover salaries (Interview #89), a point emphasised by one of the sector officers in my case study *woreda* (Interview #179). Also, *woreda* governments expect capital funding for water supply infrastructure to come from

⁷⁸ At regional and *woreda* level, budget formula are supposed to be devised in line with this federal budgeting formula (Arsano *et al.*, 2010: 13). At the same time, the proportion of resources allocated to different sectors also is subject to the priorities of regions and *woredas* (Keller and Smith, 2005: 274, Alemu and Thomas, 2009: 8, 9). This indicates that there is ambiguity about the freedom for regional and *woreda* governments to set their own priorities. Keller and Smith (2005: 274) comment that, in practice, decisions at lower administrative levels generally conform to federal level priorities.

donor programmes or NGOs (Amberbir, 2007: 83, Alemu *et al.*, 2010: 21), confirmed by interviews in my case study *woreda* (Interview #96). Another problem is that, before 2010, WME offices were not part of the executive government body, the *woreda* cabinet, where budget allocations to different sectors are decided (Alemu *et al.*, 2010). This dynamic, confirmed by interviewees in my case study *woreda* (Interview #96), reduced the sector's ability to obtain budget shares even for ongoing expenses such as fuel and per diems crucial for regular duties.

The main dynamics of Channel 1a is the allocation of Federal treasury funding through block grants to regional and *woreda* governments for all the basic services sectors rather than allocation directly for the UAP. The budget distribution formula considers a number of factors including investment requirements for rural water, which means that existing water access levels are one among several factors taken into account in the allocation of funds for rural water supply. An important inhibitor in the link between results-based information and budget allocations under Channel 1a, is that treasury funding for capital investments is very limited at the regional and *woreda* levels in the Southern Region. At *woreda* level, in particular, block grants were mainly used to pay staff salaries and recurrent expenditures. Therefore, use of monitoring results to inform future rural water supply investments under Channel 1a was a largely theoretical exercise in 2010.

Channel 1b manages funding from donor programmes that flows through the GoE's expenditure system, but is managed via special accounts earmarked for water supply and sanitation. In the Southern Region, in 2009/10, this channel was used by the AfDB, the WB (which also administered additional funding from DFID), and UNICEF. Channel 1b funding allocations follow a project type arrangement, each programme providing funding for use only by specific *woredas*. Table 8.1 presents the number of *woredas* supported by the donor

programmes in the region. Among the region's 134 *woredas* (BoFED, 2008: 1), 80 received regular support from one of the three donor programmes; the general rule being that a *woreda* can receive funding from only one donor programme (Interview #4). Table 8.1 shows that the three donor programmes have different start and end dates, and that funding periods vary between five and eight years. In addition to regular funding, UNICEF provides significant sums to the region for emergency support. This funding, which went to 25 *woredas* in 2009/10, is subject to entirely different rules.⁷⁹

Table 8.1 Funding periods and number of *woredas* funded under Channel 1b, for the Southern Region

Donor Programme	Funding period	Number of <i>woredas</i> with investments in rural water in 2009/10
UNICEF	2007-2011 ³	22 ¹
World Bank (and DFID)	2004-2011 ³ (2007/8-2011/12)	34 (under DFID, 35) ¹
African Development Bank	2006-2010 ³	23 ¹
Total		80

Sources: ¹BoFED unpublished list of water supply intervention *woredas* 2009/10, ²Interview #89; ³DAG (October 2007)

The decisions over which of the 134 *woredas* will receive donor support are taken by the regional government in consultation with the individual donor programmes (Interview #89). In the case of the Southern Region, there are several criteria influencing these decisions, including existing water supply access figures for the *woreda*, achieving an equitable distribution of funding across the 56 ethnic groups in the region (Interview #89), and the nature of the donor programme. For example, the Dutch Government, which provided funding for 8 of the 22 UNICEF funded programmes, requested the GoE to identify adjacent *woredas* in different zones (Interview #89), presumably to facilitate programme support visits by UNICEF

⁷⁹ Emergency funding is provided based on emergency reports usually related to incidences of flooding or drought, or high levels of waterborne diseases such as 'acute watery diarrhoea' (the euphemistic description of cholera in Ethiopia). Emergency funding is usually for one year and can be provided regardless of whether the *woreda* is already receiving funding under another programme (Interview #89).

staff. For the first round of the WB and DFID funded WASH Programme, an important criterion in the choice of intervention *woredas* and to ensure a fast uptake of activities was the *woreda* government's estimates of existing levels of capacity and demand (Interviews #8, #110, #179).

The amounts of funding allocated to individual programme *woredas* is subject to programme specific criteria. For instance, the WASH Programme spreads its total funding evenly across its programme *woredas*, resulting in a total budget of ETB3.5 million for each *woreda* across the funding period (Interview #181). Although existing service levels are one of the criteria for choosing programme *woredas*, they are not considered in the distribution of resources across the 34 programme *woredas*.

The above factors illustrate that the existing level of access to water supply is one among many aspects taken into account when choosing programme *woredas* for Channel 1b. Funding from Channel 1b is allocated for funding periods of five to eight years, to specific *woredas*, which does not necessarily align with government's strategic planning. This means that the Southern Region's government cannot strategically use Channel 1b resources for its planning towards the UAP.

Channel 2 represents multi-sector donor programme funding, the PBS (Protection of Basic Services) and the PSNP (Productive Safety-Net Programme) outlined in Chapter 2. Funding for these programmes is channelled outside the water sector, and is handled through special Ministry of Agriculture and Rural Development (MoARD) accounts and by its lower administrative level line offices (WB, 2009). I use the example of the PSNP, which was active in my case study *woreda*, to illustrate decisions on budget allocations for rural water supply. The criteria for qualifying for PSNP support do not include rural water access and are related mainly to the level of food insecurity in the *woreda* (MoARD, 2010: 5). In the Southern Region, this qualifies 78 out of 134 *woredas* to receive funding (Interview #204). Financial resources

from the PSNP can be used only to fund the construction of labour intensive and low-cost schemes, that is, hand-dug wells and protected on-spot springs; and for the rehabilitation of existing schemes. Decisions about the allocation of capital funding under the public works component of the PSNP are taken at *woreda* level (MoARD, 2010: 29). In theory, these decisions are based on a participatory, bottom-up planning and budgeting process in each *kebele* (MoARD, 2010: 35). In practice, when the annual *woreda* budget is negotiated in the relevant *woreda* government task force, priorities established at higher levels have an important influence on the distribution of capital resources. For example, one officer who had been present at PSNP budget debates, explained that one already decided priority was the construction of farmer training centres in every *kebele* (Interview #40). Some considerations are political; for example, the *woreda* administrator's place of birth was prioritised over other *kebeles* (Interview #40, 129).

In summary, Channel 2 funding for rural water is beyond the control and even knowledge of the water sector above the *woreda* level.⁸⁰ At *woreda* level, under the PSNP, the rural water sector competes for capital funding allocations with the other services sectors; and capital funding for water is subjugate to higher administrative priorities and political considerations.

Channel 3 funding or project-based aid, comes from NGOs and some bilateral donors. The dominant aspect of the budgets allocated via this channel is that they are independent of the GoE. Allocations by donors to this channel were relatively small in 2009, but the amount of NGO funding to the sector was estimated at around 12%. As suggested in Chapter 2, it is probable that NGO contribution amounts are actually higher. For example, in the Southern Region, only 17 of the 39 NGOs with rural water supply projects in 2009 provided information

⁸⁰ Until the public finance review cited above, federal level sector stakeholders were not fully aware that these programmes make a significant contribution to the construction of rural water supply infrastructure in Ethiopia (WB, 2009).

on their interventions; the Consortium of Christian Relief & Development Associations' basis for the 12% estimate (CCRDA, 2010).

The Southern Region government is closely involved in NGOs' selections of intervention *woredas*. According to a senior BoWR officer, existing levels of services and of support are important criteria for identifying *woredas* (Interview #4). However, the Southern Region BoWR's internal list of NGO interventions does not show a particularly high level of NGO activity in *woredas* not covered by donor programmes because there are multiple factors, in addition to regional government preferences, that affect the choice of NGO intervention areas. Every NGO, whether local or international, is bound by a number of factors that determine where and how it intervenes.

For example, the work of World Vision in my case study *woreda* is child-focused and is multi sectoral with the result that the BoWR is not the main point of contact and, therefore, is not involved in the selection of NGO intervention areas. Also World Vision works through local 'area programmes' that tend to intervene in the same locations over extended periods (Interview #77). In 2010, the NGO had been active for 25 years in my case study *woreda* and, as I explain in more detail in Section 8.2, was by far its most important source of funding for rural water supply, providing more than a third of all the *woreda's* rural water supply schemes. Another example is a local NGO 'Acts of Compassion', which works in my second case study *woreda* and is particularly committed to the development of those living there (Interview #185). The NGO has received funding for 2009-2012 to implement a hand-dug well programme. The BoWR has no leeway to influence either the type of technology or the geographic area of intervention of this NGO.

Based on this short overview of the dynamics of budget allocations for rural water within three financing channels in Ethiopia, I would suggest that results-based information on rural water access is one among many factors that influence related budget decisions. In relation to

Channel 1a, the GoE's funding channel for the UAP, the main issue is the general lack of budget resources for capital funding. The bulk of capital investment for rural water comes from Channels 1b, 2 and 3, each of which applies different criteria to budget allocation. Although existing service levels are always a condition, budget allocations are subject to numerous additional conditions and factors, which, together, limit the BoWR and WME offices' control over these funding sources. In the next section I discuss some repercussions of this situation.

8.1.3 Repercussions for the BoWR and WME offices' control over funding

The BoWR directly controls the allocation of Channel 1a treasury resources for rural water supply, and has a degree of authority over the distribution of Channel 1b funding, donor funding earmarked for water supply, sanitation and hygiene, across the region's 134 *woredas*. However, in practice, donor preferences also play a role in the allocation of programme *woredas*, and the fact that a fixed amount of finance is locked into specific *woredas* for periods of five to eight years reduces the regional BoWR's flexibility to use funding from this source to respond to PM results. In relation to Channel 2 funding allocated to multi-sector programmes such as the PSNP, the regional BoWR has little knowledge about and no influence over these budget sources because the allocation of funding to specific sectors under these programmes has been devolved (mostly) to *woreda* level. Furthermore, the BoWR has very limited control over Channel 3 funding provided through NGOs. This means that the BoWR directly controls only a small proportion of the capital funding for rural water supply in the region. In the financial circumstances obtaining in 2010, the BoWR's scope for strategic planning was likely to be limited.

The WME offices have a higher level of control over financial allocations once funding reaches their *woreda*. However, their level of control is limited by a number of factors. One contextual factor is that, because of general budget deficits at *woreda* level, Channel 1a treasury funding goes mostly to salaries and operational budgets. Channel 1b funding for water supply,

sanitation and hygiene under the WASH programme is constrained by a universal budget ceiling that takes no account of the *woreda*'s estimated access or infrastructure investment requirements. Funding under Channel 2 is limited to low-cost schemes, which are not viable in many lowland and dryland areas. NGO funding under Channel 3 is highly dependent on the nature of the particular NGO intervention.

Overall, the findings in this section suggest that the complex mix of financing modalities for rural water supply poses an obstacle to the creation of a direct link between monitoring results and budget allocations in Ethiopia's Southern Region. In Section 8.2, I explore the realities of strategic planning for rural water supply at regional and *woreda* level, in more detail.

8.2 Strategic planning for rural water under the UAP

In this section, I analyse the theoretical relation between PM results and the setting of strategic targets under the UAP at regional and *woreda* levels. My account of strategic planning at the regional level builds on the MSc thesis of Tegegn Amberbir, a senior expert in the BoWR, who, in 2007, carried out a detailed study of the Bureau's 2006 five-year strategic planning process.

8.2.1 The BoWR's 2006-2010 strategic plan preparation

At the regional level, the subject of my analysis is the BoWR's five-year strategic plan for 2006-2010 (BoWR, 2007). In the area of rural water supply, the plan's objective, derived from the UAP, was to increase rural water supply access from 45% in 2006 to 73% in 2010 (BoWR, 2007: 17). Amberbir (2007) made a detailed study of the 2006-2010 strategic plan preparation, through focus group discussions and individual interviews with experts involved in the process. Amberbir highlights a number of factors that are indicative of a lack of strategic direction in the preparation of the Bureau's strategic plan.

One factor identified by Amberbir was the arbitrary appointment of staff members to the strategic planning team. According to Amberbir, the five experts selected by the BoWR to carry out the strategic planning were not representative of the various departments and sections of the BoWR, and they did not have appropriate educational backgrounds or work experience in strategic planning (Amberbir, 2007: 50-51).⁸¹ In the interviews he conducted with members of the strategic planning team, team members themselves stated that they were selected “arbitrarily” (Amberbir, 2007: 50).

Another factor limiting the team’s strategic planning ability was the lack of time and resources required for a thorough planning process. For example, the planning team did not receive sufficient support for data collection and consultation with relevant partners such as donor programmes and NGOs operating in the region (Amberbir, 2007: 54). The lack of data on existing service levels, and on human, material and financial resources was a serious hindrance to its strategic planning activity. Due to the lack of systematic information on water resources potential in the region, and lack of detail about the status of schemes, the team was unable to forecast amounts of financial resources and capacity needed to construct new schemes and rehabilitate existing ones (Amberbir, 2007: 55). The team was not able to consult with development partners in order to get information on their contribution to proposed construction and rehabilitation activities. Instead, the strategic plan assumed that donor programmes would cover 50% of estimated costs (Amberbir, 2007: 48).

Amberbir highlights also that the planning process followed a top-down approach that was out of touch with the realities. The BoWR had to formulate its strategic plan in line with the “pre-defined goals, objectives and strategies” of the MoWR some of which, in Amberbir’s view, were “not practical to the [BoWR’s] local conditions” (Amberbir, 2007: 57). Amberbir

⁸¹ Of the five experts making up the team, four persons had a technical or engineering background.

comments also that that the UAP goals and timelines were dictated onto the Bureau even though “they cannot be achieved in the specific time period” (Amberbir, 2007: 57).

Amberbir’s analysis indicates that the BoWR’s preparation of the five-year plan to achieve the UAP targets had the character of a ‘rubber stamping exercise’, particularly because it did not build on sufficient results-based information and was not aligned to available budgetary resources. The BoWR’s limited control over financial resources may explain the absence of a clear strategy in the Bureau’s five-year plan. It might also have been exacerbated by the Bureau’s lack of ownership of the ambitious targets handed down from the Federal MoWR (see Chapter 6). Whatever the reason, the logic underlying the linear RBM model of PM feeding into the revision of objectives and related allocation of budget resources, cannot be confirmed for the 2006-10 strategic sector planning process.

8.2.2 Planning for rural water supply at *woreda* level

For *woredas* that receive capital funding from Channels 1b, 2 and 3, the fragmentation of these funding sources, their lack of alignment with the GoE’s strategic planning periods, and the mismatch between the necessary strategic planning exercises and capital funding to implement individual plans, are all factors impeding the smooth flow between monitoring and strategic planning for rural water supply. I explore these factors based on the situation in my case study *woreda*.

In my case study *woreda*, the block grant (Channel 1a) provides funding for staff salaries and operational budgets, but no capital funding. The three major sources for capital funding of rural water supply infrastructure are the WB WASH Programme (Channel 1b), the PSNP (Channel 2) and the NGO World Vision (Channel 3). As a result, strategic planning against the UAP is not supported by a Channel 1a budget, and the funding provided by the WASH Programme under Channel 1b and the PSNP under Channel 2 was subject to separate planning processes.

Table 8.2 presents funding period durations, infrastructure built, and approximate capital spending for the individual financing modalities present in my case study *woreda*.⁸² Comparing these characteristics across the four funding sources, we see that the durations of all three capital funding sources are unaligned with the BoWR's strategic five-year plan for 2006-2010. Comparison of capital estimates for scheme construction from the three funding sources shows big differences in amounts. By far the largest source of capital funding comes from the NGO World Vision; the second largest funding source, the WASH Programme, is less than one-tenth of the capital funding provided by World Vision.

Table 8.2 Various characteristics related to individual financing modalities in my case study *woreda*, June 2010

Financing modality	<i>Woreda</i> block grant	WB WASH Programme	PSNP	World Vision WatSan Project
Financing channel	1a	1b	2	3
Funding period	2006-2010	2005-2012	2007-2011	2007-2011
Schemes constructed until 2009/10	0	2 Hand Dug Wells 2 Shallow Wells 10 Protected Springs	8 Protected Springs	9 Boreholes 5 Shallow Wells
Construction cost estimates based on MoWR (2005)	Not applicable	586,612 ETB	303,680 ETB	7,080,969 ETB

Sources: World Vision project document, MoFED Water Supply and Sanitation fund utilisation sheet, MoFED PSNP Fund Utilisation Sheets & report prepared by officer for me

Also, the schemes constructed and strategic planning requirements under the different financing modality are at odds with each other. The majority of capital funding between 2005 and 2011 was provided by World Vision, which, under Channel 3, operates completely outside the GoE's financial system; the five-year strategic UAP plan has no capital budget under Channel 1a. The WASH Programme, which provides less than a tenth of the sum allocated by World Vision's capital resources, works on a seven-year strategic plan that is constituted by individual two-year plans, and funding under the PSNP is linked to separate yearly strategic

⁸² I was unable to obtain budget information that was comparable across the three programmes; therefore, I use MoWR 2005 construction costs estimates by scheme type as a proxy for comparing investments from the three budget sources for rural water.

planning exercises. This means that strategic planning is far from the straightforward, textbook exercise suggested under the RBM model for the WME office. Rather, the WME office is obliged to 'muddle its way through' the dysfunctionality of parallel formal performance-based planning exercises, without budget or budget sources outside the formal planning processes.

When I asked the WME officer in charge to explain his planning for rural water supply, he differentiated between the formal requirements the office was required to adhere to, and an overall planning exercise for the *woreda* council that was based on existing and potential funding sources in the *woreda*. The notion of adherence to plans was expressed by a senior WME officer as "if the WASH Programme asks us to prepare a plan, we forward it; if we are asked by the PSNP, we will do the same; if the BoWR asks us, we will give it" (Interview #96).

According to this statement, the preparation of strategic plans for particular programmes has connotations with complying to set rules rather than providing a basis for concrete, strategic decisions. On the other hand, the same WME officer explained that, his office also prepares a yearly action plan for the *woreda* council, which takes all the different funding sources into consideration. He explained that this plan:

... is very flexible. Strategically, you may show that, if budget is available, this number of schemes will be implemented. You plan like that. If the budget comes, you implement, if the budget does not come through, it will be covered by another programme. (Interview #96)

The officer's explanation shows that the WME office acts strategically, but not according to a specific programme-based plan. Rather, it is the budget resources available under different programmes with their various conditionalities that determine the WME office strategy. For example, to rehabilitate a specific scheme, the WME office would put in a budget request under the WASH Programme and under the PSNP. In addition, WME experts would lobby for funds with World Vision and enquire with the zonal WME department about sources of funding from other NGOs active in the zone. Once funding materialises from one of these sources, the WME office undertakes the rehabilitation works. Based on the various bottlenecks

and opportunities under the different financing modalities available to the WME office, I conclude that the notion of ‘muddling through’ more accurately describes planning for water supply in my case study *woreda* than the RBM’s linear concept.

8.3 Factors affecting specific rural water access decisions

In this section, I trace processes leading to specific decisions related to rural water access: the refocusing of WASH Programme funding from the lowland to the highland area in my case study *woreda*, and the repair to the Chinese scheme in the lowland *kebele* discussed in Chapter 6. I examine the factors affecting these decisions, and whether PM was a necessary, sufficient or merely contributory factor in these decisions.

8.3.1 The reallocation of World Bank WASH funding

As discussed in Chapter 2, the WB WASH Programme was designed to support decentralisation of the rural water supply services to *woreda* level by providing a model for performance-related planning and implementation (MoWR, 2004a). This includes the WASH Programme’s participatory, bottom up approach, which allows prospective users to choose their preferred type of technology.⁸³ However, in the *woreda* I studied, the WASH Programme initially funded a number of low-cost schemes in the lowland *kebeles* where residents were dissatisfied with the water quality from shallow water sources. Three years into this project, most of the WASH Programme’s financial resources were reallocated to the construction of protected springs in the *woreda*’s highland areas. Below, I trace the process that led to the first, unpopular decision and its later abandonment.

8.3.1.1 Tracing the process of allocating WASH funding

In 2005, when the WASH Programme was launched in my case study *woreda*, it included a substantial capacity building supporting component, consisting mainly of a *Woreda* Support

⁸³ The users’ chosen technology is specified in a certificate signed by all expected users of the scheme.

Group (WSG), a three-member consultant team that provided ongoing technical support services to the *woreda* administration for a period of two years. Specifically, the WSG supported the establishment of a *Woreda* WASH Team (WWT), a planning and coordination body to include representatives from various government offices, mandated to provision of water supply, sanitation and hygiene.⁸⁴ The WSG would assist the work of the WWT in the planning and implementing of water supply services in accordance with the WASH Programme's guidelines.

One of the first tasks in the WASH Programme was choosing priority intervention *kebeles*. According to one of the WSG consultants (Interview #110), and the deputy *woreda* administrator (Interview #8), a number of criteria, such as water supply and sanitation service levels, willingness of *kebele* representatives to cooperate, and accessibility of the area informed the choice of intervention *kebeles*. However, in reality, most weight was given to those aspects that increased the likelihood of a speedy implementation process. The WASH Programme operated by transferring budgets from low performing *woredas* to those receiving more funding (Interview #110). So, in order to maximise WASH Programme resources, the WSG consultant advised the WWT to prioritise the more accessible *kebeles* in the lowland areas.

The consultant's advice followed another of the WASH Programme's guidelines, a preference for low-cost technologies whenever they supported year-round water supply (WB, n.d.: 77). An additional incentive for using low-cost technologies was the budget ceiling of ETB3.5 million per *woreda*, which meant greater exploitation of cheaper technologies allowed more areas to benefit from the available budget. However, low-cost technologies were contrary to the preferences of lowland residents for deep wells and household connections. In interview the WSG consultant acknowledged awareness of residents' preferences, recounting their

⁸⁴ The WWT consisted of members of the *woreda*'s executive body, the *woreda* cabinet, and representatives of agriculture, education, finance, health, water, and women's affairs offices.

responses to his advice: “we don’t want hand-dug wells and shallow wells, we want a piped scheme” (Interview #110). He sympathised with them, but continued to recommend low-cost technologies based on the limited funding available:

They said so many things but we confronted them that, actually, your selection is good, but the approach is that the allocated budget is a factor for deciding which types of schemes will be implemented. (Interview #110)

According to one of the WME officers involved in the process at the time, *kebele* residents were told that their choice was between a low-cost scheme or no scheme (Interview #179). He explained that the *woreda* cabinet members represented on the WWT also were reluctant to provide low-cost technologies in lowland areas because they were aware of the negative attitudes to these scheme types among residents (Interview #179). However, the WWT ultimately accepted the WSG’s recommendation.

The WWT’s decision reveals a power dynamic similar to that discussed in Chapter 7. A powerful actor, here the WSG, was able to impose its interpretation of what was best for the *woreda* – namely starting with interventions in the more accessible lowland areas and implementing low-cost technologies – despite the participatory procedure built into the WASH Programme. Rather than users’ preferences, fast implementation of low-cost technology became the main driving force for the allocation of financial resources. In theory, the WSG had only an advisory role; the WWT was the official decision making body; in practice the WSG, through its strategic positioning as a link between the *woreda* government and the WASH Programme’s regional implementation unit, was able to shape decisions taken under the WASH Programme.

8.3.1.2 Factors affecting the shift of WASH Programme budget to highland areas

Shortly after the unpopular decision to construct low-cost schemes in the lowlands, the WASH Programme was halted temporarily because of procurement and financial reporting bottlenecks at higher levels (see Chapter 2). When it resumed in 2008, some of the dynamics

around rural water supply had changed in my case study *woreda*. In 2007, the NGO World Vision had secured large capital funding for a five-year water and sanitation project. World Vision wanted to use this funding to construct deep wells in the more accessible and more densely populated lowland areas of the *woreda* (Interviews #77, #179), the area where the WASH Programme was planning to implement low-cost technologies. When the WWT learned about the new project, it decided to refocus the WASH Programme funding on the *woreda's* highland areas. Reallocating the WASH budget to the highlands enabled the office to use the budget sources available to them more effectively, providing deep wells in the lowlands and implementing protected springs in the highland areas (Interviews #8, #96, #179). The following factors facilitated the WWT's decision to make use of this 'window of opportunity'.

Since the start of the WASH Programme in 2005, the capacity and skills of WME officers had been increasing, boosting the confidence of the WME office. By 2008, the WME office was upgraded to an independent office at *woreda* level with representation on the *woreda* cabinet. Its staff numbers had grown from 3 experts in 2005 to 13 in 2008. Through its implementation of a rural water supply inventory in 2007 under RiPPLE-related action research outlined in Chapter 7, the WME office had a better understanding of the water-related needs across the *woreda* (Interview #8, #179).

In 2008, the WWT was more conversant with the WASH Programme approach. Having trained a number of local artisans with WASH Programme support, the WME office was confident that it could implement the Programme in the less accessible highland areas of the *woreda* where unprotected springs offered ample opportunities for low-cost technologies. At the same time, the WASH Programme's reputation had deteriorated in the lowland areas. Although residents had contributed financial resources to a technology choice that was not their preferred one, infrastructure construction had been delayed for more than 12 months. The WASH Programme was nicknamed "*wushet*", an Amharic word meaning 'false' or 'liar' (Interviews

#77, #110). The WWT generally became more self-reliant after completion of the WSG contract in 2007: this was emphasised by the former *woreda* administrator who remarked that “the *woreda* became autonomous to take decisions” (Interview #8).

Tracing this process confirms that policy processes are not driven exclusively by a singular rational model and also do not proceed in the strictly linear fashion suggested by the RBM model. Instead, decisions are the outcome of diverse, ongoing negotiation, which is influenced by changing power dynamics, as discussed in 4.3.2 on the politics of policy processes. In this case, disruption to the WASH Programme, termination of WSG’s contract, and the WME office’s greater capacity and understanding of local water needs across the *woreda*, all of which enabled the WWT to act autonomously in deciding to reallocate WASH funding. This example clearly highlights that it is multiple factors rather than results-based information alone that shape rural water access decisions.

My analysis of the particular role of PM results (service levels across *kebeles*) in diverting the WASH budget from the lowlands to the highlands demonstrates that the WME office’s increased understanding of the different rural water supply needs across the *woreda* was a necessary factor in this decision. At the same time, I would argue that this deeper knowledge regarding the *woreda*’s water supply needs was not based only on PM results; the WME office had accumulated a body of ‘tacit knowledge’ on the water supply situation in the *woreda* based on its participation in action research undertaken by RiPPLE, day-to-day interaction with WASH committees, *kebele* officials, and other factors.

8.3.2 Repairs to the Chinese scheme

The process of repairs to the Chinese scheme complements the above example. In addition to drawing attention to the multi-causality in decision making related to rural water access, this case focuses on the dynamics between users, the WASH committee, the *kebele* administration and the WME office.

8.3.2.1 Tracing the process leading to repair

The Chinese scheme, which is the deep well described in Chapter 6, had served the lowland *kebele's* residents since the late 1980s, when their number was only a few hundred living in one small hamlet. The scheme was managed by the WASH committee, responsible also for the two functional hand-dug wells in the *kebele*. The WASH committee employed three people: an operator to service the pump and refill the reservoir twice daily, and two tap attendants to manage the queues and collect fees at the two public water points.

Since 2006, the scheme had suffered a succession of breakdowns and cycles of attempted repairs and was often out of operation for long periods, until its eventual successful repair in May 2010. The original technical problem was a leak in the reservoir. An unsuccessful attempt to repair it by the WASH committee resulted in damage to the pump motor which ceased to work. BoWR staff repaired the pump motor, but not the reservoir leak, and within a month, the problem recurred. The WASH committee had become disheartened and was reluctant to mobilise more funding from users, with the result that the scheme remained non-functional for over a year (Interviews #44, #28, #142, #36).

At that time, the *kebele's* population counted several thousand residents, and demand for water had increased substantially. During the drought year of 2008 (see WRI discussion in Chapter 7), the situation became particularly precarious. Women were forced to travel, on foot and at night, to the 5km distant *woreda* town, to collect water; a family might have to spend up to ETB5 per day on water, equivalent to half the basic wage of a labourer (Interview #209). As a result of the WRI in October 2008, the WME office again reported the Chinese scheme. The WRI results, which were debated by the regional cabinet in summer 2009, highlighted non-functionality of schemes as a major issue that was impacting negatively on service levels. Regional government designated maintenance a priority action for the BoWR in financial year 2009/10 (Interview #144).

At the end of 2009, with the general elections scheduled for May 2010, fast approaching, the *kebele's* residents began to voice their dissatisfaction more loudly. According to the former WME head, a consensus was forming among there was a saying across the lowland *kebeles*, that “the regional president would not earn his seat” if their urgent water problems remained unaddressed (Interview #179). This resulted in the *woreda* government putting political pressure on the regional government to repair the major breakdowns of the motorised schemes in the *woreda*, while the WME office continued to follow up with the BoWR. In January 2010, a team from the regional BoWR repaired the scheme’s pump, but the problem with the reservoir continued (Interview #179). Meanwhile, the WME office had negotiated with World Vision for two new reservoirs, and had purchased a third using WASH Programme funding (Interview #179).

There was a local resident, who was the priest’s son and had been headteacher of the *kebele's* school, who played a key role in pushing for the repair to the Chinese scheme. He highlighted that *kebele* residents collectively, were spending some ETB5,000 a day to buy water from the *woreda* town. He managed to convince the *kebele* residents to make a one-off contribution to enable the WASH committee to pay for the labour and spare parts needed to install the new reservoirs (Interview #209). However, in early 2010, the WASH committee experienced a leadership crisis. The chairman who had been overseeing the management of the three schemes since the late 1980s (the Chinese scheme and the two hand-dug wells), resigned as a result of accusations of financial mismanagement (Interview #192). The *kebele* administration, under pressure to demonstrate performance before the upcoming elections, intervened to organise payment for the repair works and the purchase of various smaller spare parts (Interview #124). The repair to the reservoir was finally completed two weeks before the general elections in Ethiopia in May 2010.

However, although the scheme was operational during my visit in 2010, there were various signs that the service might experience more disruption. The operator was worried that one of the main technical problems related to the pump motor's failure was not completely resolved. The WASH committee had been reluctant to spend money on replacing the part because it did not want to deplete its financial savings, and the WME office had been unaware of the problem. Over the years, there had been a series of financial management problems, including lack of transparency in recording income and expenditure and failure to make regular deposits, misuse of power resulting in the female cashier being made to release money to the committee chairman and the *kebele* administration, and growing mistrust, abuse of roles, and suspicions of cheating by the WASH committee and its employees (see discussion in Chapter 6). These internal WASH committee dynamics indicate that scheme management and, thus, scheme functionality were jeopardised.

8.3.2.2 *Factors affecting the repair*

The long and convoluted story of the repairs to the Chinese scheme highlights that even decisions that, viewed from a distance, appear relatively straightforward, were subject to a complex set of inhibiting and facilitating factors. In the following discussion, I distinguish between factors that hampered and factors that facilitated the repairs.

Harvey and Reed (2004), referred to in Chapter 2, claim that the high non-functionality rates of hand pumps in Sub-Saharan Africa is due to lack of attention to the wider context and the specific local conditions under which CBM (Community-based Management) is practised. Both these aspects apply to the case of the Chinese scheme repair. Concerning the wider context, an inhibiting factor in the Southern Region is that the wider policy environment does not provide the WASH committees with the necessary support structure, oversight, and direction. As discussed in Chapter 2, WASH committees are not legal entities, training of their members is not institutionalised, and there is no regulatory oversight of their financial management; in

2010, the BoWR's community participation and training service had no dedicated budget or work plan (Interview #111).

A problem specific to the Chinese scheme was lack of clarity over financial responsibility for major repairs. Although responsibility for maintenance of the pump was assumed by the BoWR, it did not take on the task of repairing or replacing the reservoir. In 2010, the cost of a reservoir was ETB37,000, the representing the equivalent sum of constructing a hand-dug well, which clearly was beyond the financial capacity of local users. In the case of the Chinese scheme, the WME office tried to find another source of finance; it negotiated with World Vision to donate two reservoirs and purchased a third using the WASH Programme budget. The WASH committee promised to provide financing to cover local labour costs and tools.

There were also logistical and capacity problems related to the regional BoWR's maintenance team which added to delays in repairing the Chinese scheme. As discussed in Chapter 2, the Bureau's logistical capacity for carrying out major repairs in the region is limited. For instance, in 2010, the BoWR had only one vehicle in good working condition, but was in need to carry out major repairs in its 134 *woredas* (Interview #20), to service the 751 non-functional shallow wells and 120 non-functional deep wells recorded in the 2008 WRI that potentially required major repairs (BoWR, July 2009).

In addition, lack of capacity and professionalization of scheme management (Fonseca and Njiru, 2003) discussed in Chapter 2, contributed to delays to the repair of the Chinese scheme, and increased the likelihood of subsequent breakdowns. The WASH committee struggled to manage its income and expenditure to keep the scheme operational, and there was a growing climate of distrust related to the handling of financial resources. Although the WME office encouraged good financial management by WASH committees as a result of the RiPPLE action research conducted in 2007, guidelines, authority and capacity were inadequate to address the WASH committee's financial management problems.

Finally, the dominant engineering culture of “design and build” (Harvey and Reed, 2004), highlighted in Chapter 2, had implications for how the MoWR conceptualised ‘access’. As discussed in Chapter 6, senior officials in the MoWR described the notion of ‘scheme potential’ as shorthand for ‘access’, justifying this understanding as the government’s role in rural water supply being that of a ‘supplier’ of infrastructure rather than facilitating a continuous service. This lock-in to a ‘project-based mode’, a mode of working where attention is mostly on completing a project cycle which ends with the scheme being handed over to the WASH committee, has implications for monitoring and following up of non-functional schemes in Ethiopia. Although the WME office had reported the broken-down Chinese scheme several times, including during the WRI, it took time for the BoWR to respond, and the completion of the repair required additional follow up from various actors.

A number of factors facilitated the repair of the Chinese scheme.

A combination of contextual factors put repairs to the Chinese scheme at the top of the local political agenda. An important contextual event was the 2008 drought, which increased the *kebele* residents’ hardship and led them to voice their discontent in political meetings. The drought also triggered the WRI and, based on the results of this inventory, the regional BoWR increased its efforts to carry out repairs across the region, including the Chinese scheme. It is likely, also, that the Bureau’s maintenance team was helped by the relative accessibility of the *woreda*, which is situated on the main road between two zonal towns. Another facilitator for the regional repair team was the continuous follow up from the WME office with the regional BoWR, and from the *woreda* administration with the regional government.

At the local level, the son of the retired priest worked to accomplish the scheme’s repair. He was crucial for motivating and supporting the WASH committee, for example, by persuading the *kebele*’s residents to contribute financially. Finally, the imminent elections created a

‘window of opportunity’ to push for the remaining repair works to be finished. Several interviews referred to the upcoming elections as a strong motivating factor prompting the *kebele* administration to mobilise efforts and resources to finish the outstanding tasks, that is, welding and mounting of the three new reservoirs. Finalisation of the work, just two weeks before of the Ethiopian general elections, demonstrates the importance of this contextual factor. It highlights also that, even though the Ethiopian Government can be characterised as authoritarian, in this case government officials reacted to pressure from citizens.

Overall, PM results (here, the WRI) were not a sufficient factor to explain repair of the scheme. However, the WRI results and the related commitment of the BoWR to achieve better functionality of schemes across the region, played a part. Among the multiple inhibiting and facilitating factors discussed above, monitoring results can be seen as a contributory factor. They can also be considered a necessary factor since, without the WRI and increased regional commitment to scheme maintenance, the Chinese well repairs might have been further delayed. Compared to the RBM model, which assumes a linear link between appraisal results and decisions, this detailed examination of the process related to a particular scheme breakdown and its repair shows that, again, many other factors acted as intervening variables.

8.4 The role of performance monitoring in rural water access decisions

The focus in this chapter has been the link between PM results and decisions within the single-strand feedback loop of the RBM model’s ‘results chain’, investigated through scrutiny of budgeting and strategic planning for rural water, and detailed analysis of the various factors affecting two specific water-related decisions.

The analysis of budget decisions related to rural water supply in Ethiopia reveals the huge complexity of the financing arrangements in the sector, and shows also that Channel 1a

funding, which adheres to government rules to distribute budgets via block grants to regional and *woreda* levels, provides very limited capital funding for rural water supply. Funding via all other channels, that is, from sector donors under Channel 1b, from multi-sectoral programmes including the PSNP under Channel 2, and from project aid under Channel 3, takes account of service levels, but is subject to numerous other factors many of which are unrelated to water supply. An example of these other factors affecting the distribution of funding across the region is a donor's request for its interventions to apply to two adjacent *woredas*. Also, the criteria for selecting intervention *woredas* under the PSNP are related to food (in)security and not the water supply situation in the area. In my case study *woreda*, the biggest source of capital funding was World Vision, an NGO whose work is child-focused and not geared primarily towards rural water supply.

The fragmentation of financing channels for rural water has negative repercussions for the control of regional and *woreda* government's over their budgets and, consequently, for their ability to plan and implement rural water supply interventions strategically. The BoWR preparation for the regional strategic sector plan for 2006-10 was tokenistic: it was rushed and not based on information provided by *woreda* WME offices, or available budgets. A sector expert who analysed the process characterises it as a pie-in-the-sky exercise, not based on the conditions on the ground and, therefore, unrealistic. At *woreda* level, the WME office planning was bound by various constraints and opportunities related to sector internal and external funding sources. A comment from one of the WME officers (see above) highlights this unrealistic planning - without a budget and then implementation whenever funding became available. The dynamic between a forthcoming budget and a shift in the plan and its subsequent implementation, is clearly demonstrated in the case of the budget reallocation from the lowland to the highland areas. The WME office's plans are based on monitoring results, but these are informed by a wider set of informal monitoring activities described in Chapter 7.

Finally, detailed analysis of two specific rural water access decisions highlights the multi-causality behind these decisions. In the case of the Chinese scheme repair, it is clear that the maintenance process involves not a linear sequence of reporting of a breakdown which is followed by repair, as assumed in the 'results chain'. Rather, there were several factors that worked in favour and against the repair process. Many of the inhibiting factors were linked to the wider CBM model, in which PM is embedded, and which has a number of serious flaws, as discussed in Chapter 2. The conclusion in relation to PM based on this case study is that the failure being reported as part of the WRI contributed to the scheme's repair and was probably a necessary factor. However, this was not sufficient to make the repair happen. From this it follows that PM, although it has a role, is not a panacea for improving the effectiveness of public services, in this case, rural water supply.

9 Conclusions

Chapter outline

Chapter 9 summarises the argument and supporting findings presented in this thesis, and draws overarching conclusions. Section 9.1 revisits the research questions, summarises the related findings and explains how they address the main research question. I discuss my case study findings in the context of the wider aid effectiveness agenda under which PM takes place in Ethiopia. Section 9.2 highlights the contributions to knowledge of my thesis research and discusses their generalisability. Section 9.3 discusses some implications of my findings for the current global consultation on targets and indicators for monitoring water supply access after 2015.

9.1 Revisiting the research questions and related findings

I began this thesis by presenting Meselich's experience of accessing water supply and drawing attention to her related problems – her daily incertitude about whether, having queued, she will be able to draw water when it comes to her turn, her mistrust of the WASH committee's ability to operate the scheme and to manage its finances, and her general desire for the service to be upgraded to household connections. I juxtaposed this story, frequent in my fieldwork *kebele*, with the access figure for her location, an abstract percentage that conveys none of the problems related to this particular setting.

I explained that current approaches to monitoring access to water supply need to be seen within the wider context of RBM, a model that focuses on achievement of measurable results that is used extensively in the private and public sectors, including the aid sector. At the

international level, global targets for improving rural water access are specified under the MDGs. They form part of the overarching MDG to halve global poverty, and the aid effectiveness agenda, which is a global architecture aimed at rendering aid more effective by putting recipients in the driver's seat of their development and poverty reduction strategies. One of the items on this agenda is sector reforms in aid recipient countries to strengthen PM of water access: Ethiopia is one of the countries where these reforms are underway.

A key proposition in my thesis is that, in the policy discourse and practice around aid effectiveness, PM commonly is portrayed as providing an objective, rational basis for decisions. This assumes that monitoring results can be assessed objectively, and that a linear causal sequence can be established between setting objectives and achieving results. I substantiated that the linear model underlying PM being the dominant agenda in aid-recipient relations by showing that not only is the logic of a linear 'results chain' well established in OECD (2010) jargon on RBM but also that this linear model has become central to the aid effectiveness agenda, and is enshrined in one of its key principles 'Managing for Development Results'. I also highlighted that the linear RBM model is being operationalised in the water sector via new global assessments, such as the UN's Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS), which track the progress of national policy and institutional reforms towards establishing results-based planning and budgeting processes (WHO, 2012d), and by showing that related reform efforts are underway in the Ethiopian water sector. The contribution of my thesis is to open a space for critical engagement with these assumptions that commonly underlie PM, set out in my research question: *What role does performance monitoring play in shaping policy decisions on rural water access in Ethiopia?*

In my thesis research I investigated PM primarily from the angle of the politics of knowledge production. Within this, I conceptualised PM as a particular form of 'social appraisal' – the process by which society informs itself of the implications of alternative policies. Appraisal

generally is comprised of social processes that are subject to the exercise of various forms of power (Stirling *et al.*, 2007). The STEPS Centre's approach to social appraisal focuses on how powerful actors, through conceptual framings, influence the inputs into appraisals, for instance, by influencing the agenda, objectives, indicators, and processes of data collection and analysis. Stirling (2005, 2008, building on Fiorino, 1989), highlights also that such framings are subject to the contrasting overall rationales or intentions of different actors to appraisal as a whole. For instance, an actor may pursue an instrumental rationale, within which efforts are made to influence appraisal processes and results towards a particular, privately-favoured end. This contrasts with a 'substantive' rationale where appraisal is intended to satisfy publicly debated criteria on the 'best' outcomes for society as a whole, or a 'normative' rationale where the focus is primarily not on 'outcomes', but on the most appropriate processes for appraisal itself. In addition to their framings of the inputs into appraisal, powerful actors influence the ways in which the outputs of appraisal to governance are variously 'closed down' or 'opened up' (Smith and Stirling, 2007).

Viewed in this light, knowledge production does not proceed in the linear fashion commonly associated with a positivist understanding of PM but instead, to a significant extent, is 'socially constructed'. Constructivist understandings help to clarify the understanding of PM by showing that the apparently definitive orientation of the linearity in question can be understood as socially contingent. This illuminates that the specific results obtained in PM can be as much an artefact of subjective social context as of the ostensibly objective features of performance highlighted under a positive view. Through a focus on actors' framings and their underlying rationales, borrowed from Stirling and Smith's discussion of social appraisal, I opened up a new perspective on PM. PM should be seen not as the conventionally-asserted uniquely-rational appraisal of performance, but instead as being about 'performativity' – the playing out on a 'management' stage of a certain politically-necessary performance (Hilgartner, 2000). From this perspective, the formal processes of appraisal may serve more to 'justify'

prior social commitments in instrumental political terms, rather than actually helping to form them in substantive terms (Collingridge, 1980, Stirling, 2005, 2008), a point also raised by authors criticising the rational model of policy making (Hajer, 1995, Hill, 1993, 1997, Lipsky, 1980, Smith and May, 1998)

I elaborated the concept of social appraisal in two ways. First, I highlighted a circularity in the framings within 'social appraisal' such that the framing of the method influences the framing of the problem. In other words, people define a problem by measuring it. For example, in their definitions of access, several actors suggested volume and distance parameters, both indicators for assessing access. This circularity between the framing of the method and framing of the problem, can ultimately set appraisals at an even greater distance from other dimensions that might inform the definition of the problem, with the result that monitoring becomes a form of self-referential 'image management', as Michael Power proposed in the context of auditing (Power, 1997).

I also deepened the STEPS Centre's conceptualisation of 'social appraisal' by suggesting that a number of different appraisal processes, of various degrees of formality, typically proceed in parallel and relate to each other in complex ways. Among the appraisal processes that build to a body of knowledge, formal – that is codified – appraisal processes may only be the tip of the iceberg (of a body of knowledge). Not all of them necessarily conform to the same patterns in forming or justifying social commitments. In this context, social appraisal becomes more a process of 'muddling through' rather than a rational comprehensive set of procedures for evaluating policy options (Lindblom, 1959), and a number of other factors than PM can be seen to affect the forming of social commitments. These wider considerations illuminate the possibility that the outcomes of appraisal and associated decisions also may be the result of contingent forms of path dependency (David, 1985), involving contextual details, material conditions, specific actor network constellations (Keeley and Scoones, 2003b), street-level

bureaucrats exercising agency in exerting discretion on day-to-day policy decisions (Lipsky, 1980), a policy space that offers a ‘window of opportunity’ (Grindle and Thomas, 1991) and so on. The dynamics of appraisal addressed here are just one of the factors at play (Stirling *et al.*, 2007).

To investigate these dynamics, I studied the case of PM of rural water access in Ethiopia. I used ‘process tracing’ as a method to analyse the political and power dynamics underlying knowledge production in this particular context of social appraisal. I assessed PM through three lines of investigation, each underpinned by a specific research sub-question. In what follows, I summarise the findings from each of these lines of investigation.

9.1.1 Examining the inputs into performance monitoring

My first line of investigation involved examination of the underlying assumption that the definition of rural water access used in PM for Ethiopia adequately represents the divergent notions of access among the actors concerned, by addressing research sub-question 1a:

What are the specific ways in which different actors (those affected and those implementing) at different levels (individual, *kebele*, *woreda*, zone, region, federal and international) frame access to rural water in Ethiopia?

The findings that emerged from my research are set out below.

Access framings in international benchmarks and guidelines, and in the Ethiopian UAP, are tilted towards a technical perspective. The normative framework provided by the General Comment 15 on the human right to water acknowledges social, economic, cultural and inter-generational concerns related to access. The WHO provides international guidelines on basic access to water that are related to volume, distance and water quality. International benchmarks on water supply set by MDG 7c, and the related global monitoring programme for water supply and sanitation, the JMP, focus on measuring whether people collect water from

an improved infrastructure. In the relevant Ethiopian policy document, the 2009 revision to the UAP, the MoWR proposes a two-tier definition of access. In this thesis, I call the first definition ‘volume-distance’, because it refers to the parameters of volume and distance recommended by the WHO; the second definition I call ‘scheme potential’ because it measures access based on estimated numbers of users who potentially can access a particular type of infrastructure (e.g., a hand-dug well has the average capacity to serve 270 people), irrespective of its functionality status.

Both international and Ethiopian rural water access goals and indicators focus on the infrastructure in place rather than on the people collecting, handling and using water on a daily basis. This focus on infrastructure reflects the organisation of the sub-sector around a project cycle approach, which is geared to infrastructure construction and is less concerned with outcomes once the project cycle has been completed. I describe this as a technical perspective because its parameters are technical and refer to typical engineering tasks, such as designing and building specific types of infrastructure, and more specific undertakings such as devising pipe sizes and lifting devices to deliver a certain volume of water to prospective users within a specific proximity. This finding resonates heavily with sector professionals’ references to a “design and build” mindset (Harvey and Reed, 2004: xix), and the adoption of “engineering and spending targets” (Carter *et al.*, 1993: 650) in the water sector, to which I referred in various chapters. A key issue in this perspective is that water access is framed in an abstract, one-dimensional and static way compared to the multiple dimensions and dynamic nature of access, which I discuss further below.

The framings of rural water access in the Ethiopian UAP represent a ‘watered-down’ version of international framings. The UAP ‘volume-distance’ parameters for defining access draw directly on WHO international guidelines, but relax them by decreasing the minimum volume from 20 to 15 l/p/d, and by increasing the maximum distance to the source from 1 to 1.5km.

The UAP 'scheme potential' parameters are similar to the JMP indicators which measure access to an 'improved' source, with the difference that, in Ethiopia, measurements are based on infrastructure inventories and not on data obtained from household surveys. For both cases the UAP uses the same parameters as international guidelines and benchmarks, from which I conclude that Ethiopian access framings are influenced strongly by international framings. However, the UAP's weaker standards have potentially negative consequences for those who are accessing water every day. The 'scheme potential' definition, which guided sector monitoring of access to rural water in 2010, for instance, is distinctive in putting forward a supply perspective: the MoWR is concerned with the supply of hardware, regardless of the distance to a water source or the volume of water collected, or the functionality status of the water source, and any other perspectives not captured by this technical framing of access.

Access definitions provide abridged stories rather than objective assessments. The definitions of access in international and Ethiopian guidelines and benchmarks are shorthand for particular methods of measuring that focus on the parameters of type of infrastructure, water volumes, and/or walking distance to the source. Rather than being entirely objective, access measurement can be seen as the enactment of a metaphor, implying a specific storyline. In this view, present framings of access in Ethiopia, expressed in the 'scheme potential' parameters, implicitly enforce an 'abridged story' in which 'access' is reduced to the infrastructure in place. This narrow version of access does not represent the lived experience – especially of women and girls – of daily fetching and handling of domestic water, nor does it take account of the perspectives of marginalised populations and vulnerable individuals, or the patterns of water availability and water needs related to livelihoods, individual wealth and other criteria. What prevails is a presumed consensus that disproportionately represents the perspectives of actors who are relatively removed from the realities on the ground. This consensus is underpinned by abstractions from lived realities achieved through the use of percentage figures for assessing access.

There is a circularity between the framing of the objectives and inputs into appraisal. Whilst access criteria are supposed to drive appraisal methods, the method determines the definition of access. In the case of the WHO-derived framing, volume and distance shape the definition of access, while in the JMP, parameters are based on infrastructure schemes classified as 'improved'. The fact that the methods drive the definition of access further increases the self-referential character of monitoring. PM becomes an act of 'image management', where specific methods simultaneously define and assess 'performance' (Power, 1997) in the access to water supply. A specific image of performance, here infrastructure, replaces truth (Lyotard, 1996).

Where there are alternative views, deviations from the framings of access codified in international and national guidelines and benchmarks tend to be limited. Sector stakeholders in Ethiopia tended initially to refer to a framing that supports the formal definition of access as outlined in the UAP policy document. At the same time, they conceded that this framing of access is not an accurate representation of the realities of access. Nevertheless, sector specialists from government, donors and NGOs criticisms did not deviate much from the framings of access codified in official policy documents and international standards. Their critical comments related mainly to the established access parameters (volume, distance and infrastructure) and did not include discussion of new dimensions of access. For example, people commented that the topography made the definition of access on the basis of distance, 'difficult'. It is only at the operational level that sector professionals' framings of access differed and were closer to the lived reality, that is, professional background and daily work. This points to the power of formal framings for influencing peoples' perceptions of reality, particularly when their working realities are removed from the operational level.

The current dominant service delivery model for rural water – a project cycle followed by CBM (Community-based Management) – reinforces path dependencies in sector monitoring.

The particular ways in which sector monitoring was organised in 2012 reaffirms the predominant framings in mutually supporting ways – favouring one particular path of development over another. Service delivery in the sector is dominated by project cycles that close with the handing over of the infrastructure to the user community responsible for CBM. Formal sector monitoring of development outputs consists of regular reports describing completed infrastructure schemes and their functionality status, complemented by occasional inventories of these schemes. The focus on hardware as a key development output in rural water supply reinforces a framing of access that is shorthand for infrastructure in the sector. This self-reinforcing dynamic between the material and discursive aspects promotes path-dependence ‘lock in’, which tends to exclude alternative, potentially feasible, modes of providing and monitoring rural water services.

The circular and self-referential character of access monitoring creates a disjuncture between a one-dimensional, static framing of access and affected peoples’ experienced realities. The technical perspective of formal access framings provides an overly static picture of access based on the capacity of the infrastructure, and disregards wider patterns of water availability and water needs. Water consumption patterns differ with the seasons and with the availability and accessibility of protected and unprotected sources, and depend heavily on peoples’ livelihood activities. For example, my case study of the highland *kebele* showed that beer brewers collected relatively higher volumes of water, and the findings from the lowland *kebele* highlighted that the satisfaction with drinking water sources depends on perceptions of water quality that extended beyond bio-chemical standards. The realities of water access are intertwined with peoples’ individual circumstances and capacities, on which bases they employ various strategies to satisfy domestic and productive water needs, exploiting a combination of protected and unprotected sources.

In addition, access to improved sources depends on socio-economic factors and governance issues such as management capacities, power relations, and affordability, which can lead to inequities, and to the social exclusion of vulnerable groups and individuals. An example of inequitable distribution was the disadvantaged Garo group in the highland *kebele* that had no access to an improved water scheme in its area despite suffering most from a lack of water supply. Also, scheme management related issues, such as opening hours, disputes over queuing, and the predictability of supply, have negative repercussions for access. In the absence of a good operational environment, for instance, the case of the Chinese scheme in the lowland *kebele*, not all of the users queuing will be able to collect water. Not all households have the same coping strategies to deal with this uncertainty: such strategies depend on access to alternative sources or the financial resources available to these households.

Women's and girls' perspectives, in particular, are neglected by the conventional technical perspective. A well-documented and persistent problem is that women's and girls' voices generally go unheard. Their perspectives tend to be ignored, and their views disregarded even when they sit on WASH committees. In both the highland and lowland *kebeles* I observed female committee members' voices being ignored and their opinions overruled by the decisions of male colleagues. Women's needs and demands are not well captured by the informal feed-back processes that often occur in parallel with formal monitoring processes. The neglect of women's perspectives is reinforced by a wider culture in which water sector staff, predominantly men with a technical educational background, tend to consult the WASH committee chairmen and *kebele* officials who also tend to be men (Zwarteveen, 2008).

9.1.2 Examining the political and power dynamics in performance monitoring

My second line of investigation is related to monitoring practices. The intention was to test whether, in reality, monitoring processes conform to the linearity assumed by the feed-back

function of PM within RBM. Research sub-question 1b addressed the political and power dynamics involved in PM practices:

Which actors' framings and rationales are represented in monitoring exercises and their results, and the decisions taken concerning rural water access?

This question emphasises the particular dynamics related to framings (and their underlying rationales). My interest was the power dynamics within these specific processes, which bring the framings of some actors to the fore upstaging those of others.

The process tracing method guided my analysis and illuminated actors' rationales in ways that helped to explain their framings. For example, tracing the process of how the MoWR arrived at the universal access goals for rural water supply helped to explain the instrumental rationales behind the framings proposed by actors. At the federal level, government officials were under pressure to achieve the ambitious 'universal access' goals, which goes some way to explaining why a particular calculation method (based on scheme potential) was chosen to measure access, and established a target such that even if schemes were not functional, was still seen as contributing towards 'universal access'. The choice of calculation method can be understood as being based on an instrumental rationale that emphasised the reporting of positive progress towards the ambitious water sector policy goal.

The findings from my research are set out below.

Reporting of access can be seen as an act of 'stage performance'. The dynamics described above, where actors support different framings based on their underlying rationales, indicates that setting and measuring of performance targets is not the objective and linearly logical process often assumed, but rather reflects various forms and degrees of social construction of associated knowledge. The measuring of access to rural water supply depends on the intentionality of the actor framing the appraisal exercise, in this case, the calculation method.

At the federal level, the MoWR's use of authority to manipulate the calculation method to derive a high access figure was motivated by the rationale to present a success story. Water sector officials at *woreda* level, in contrast, were interested in attracting more resources to their areas and, therefore, tended to use data that showed less good results. Viewed from this perspective, reporting of rural water access takes on the character of a theatre performance where different actors, using different framings, offer presentations that further their particular interests.

A WRI (Water Resources Inventory) carried out in 2008 in the Southern Region of Ethiopia provided an opportunity to study the dynamics of a particular appraisal process in depth. My interest here was in the data analysis stage of PM, because it provides a good entry point to analyse how and to what degree the inputs to this form of social appraisal were 'broadened out', for example by employing different calculation methods for access figures, and its outputs to governance 'closed down', for example, by settling on a specific calculation method as representing access.

The experts involved in the data analysis under the WRI, made efforts to broaden out the calculation of access. The access calculation methods used by the WRI data analysis team were generally bound by the UAP parameters. Therefore, their analysis is generally narrow compared with the diversity of issues that actually govern access for the residents in the two locations discussed above. However, efforts were made to broaden out the calculation of access. The WRI used four different types of access notions, and associated data, to calculate access. The WRI analysis resulted in divergent figures for water access – from a low of 13%, to 23%, 35.5% and 53.9%. The WRI analysis team also identified several factors, such as functionality and inequality in the distribution of schemes of different *kebeles*, which were directly relevant for regional government decisions.

The precision suggested by specific percentage figures may be a misleading indication of overall accuracy in PM. The disparity between the highest and lowest figures for access, based on the four different calculation methods, suggests that a definitive picture of PM may be elusive. What these figures emphasise again is that the measuring of a phenomenon (in this case 'access') is to a crucial extent subject to divergent framings. This observation supports an understanding of knowledge production as being socially constructed rather than as a linear, uniquely objective process. Another example of divergent images of access are the 2010 figures reported by the JMP of 34% compared to the MoWR figure of 65.8%. In both cases, the reader is presented with a particular picture of for access, whose representation in an abstract percentage figure, is removed from the realities on the ground.

Actors can use their positions of power to 'close down' appraisal outputs in order to justify instrumental rationales. My examination of the WRI shows that the Federal Minister of Water Resources decided that the calculation method suggesting the greatest progress (53.9%) towards the sector goal of universal access should be used. I interpret his decision as reflecting an instrumental rationale, driven by the aim of claiming positive development in the sub-sector. The minister used his position of power to impose this particular calculation method. Imposition of the most positive calculation also indicates, in the case of this PM exercise, that the direction of accountability ran strongly upwards, with the form of calculation in this case driven by political pressures at the federal level. This process of 'closing down' is another example of stage management in which the scheme potential notion of access is presented as 'truth' in order to maximise 'performance'.

In the case of implementing low-cost technologies in my case study lowland *kebele*, a powerful actor, the WSG (*Woreda* Support Group) representative, used his positional power to impose the technology 'choice' of hand-dug wells in an ostensibly participatory planning process. The imposition of this particular technology was driven by the imperative of quick budget

utilisation (therefore a start in the accessible lowland *kebeles*) and a preference for a low-cost technology. The closing down of 'participatory' choice of the technology towards an unwanted option again highlights how instrumental rationales can counteract supposedly normative processes such as participatory planning.

Despite pressures towards a particular closure, appraisal results may simultaneously be closed down to alternative outcomes, reflecting more substantive rationales. In the case of the WRI, the Southern Region cabinet acted independently of the Federal Minister, to use results to serve a more substantive imperative. Rather than simply supporting prior political aims, the objective was to achieve a substantively improved understanding of the problems relating to rural water access in the region. An important aspect of the discussion of WRI in the regional cabinet was the emphasis on the high (30%) non-functionality rate across rural water schemes in the region. Although this was one of the findings of the WRI data analysis team, it was ignored at the federal level. There are indications that this particular finding of the WRI supported the forming of social commitments. The finding of high rates of non-functionality helped make scheme maintenance a priority for the BoWR. The regional maintenance budget for the water sector was increased and there was evidence of increased levels of maintenance activities in my case study in 2010.

Outputs from the same appraisal process can be used to derive different conclusions, due to political and other dynamics in appraisal. Formally, the Minister 'closed down' the WRI results, and emphasised one result that portrayed a positive trend in patterns of access. At the same time, the regional cabinet discussed other of the WRI data analysis team's outputs, and acted on them. Similarly, once the representative of the WSG had left my case study *woreda*, the WWT (*Woreda* WASH Team) reversed the unpopular decision to use the WASH Programme budget for low-cost technologies in the lowland areas. The budget was reallocated to the highlands area for the construction of protected springs, and a new budget source was used to

develop the more popular deep wells in the lowlands. These examples are further indications that appraisal is not a linear logical exercise, but is subject to political pressures variously accommodating the interests and perspectives of different actors. In order to understand the how and how much an appraisal exercise opens up or closes down wider governance processes, my findings suggest a focus on rationales and actions of diverse individual actors. These may be independent of the formally stated rationales or imperatives driving the exercise. In the case of the WRI, it was important for the elevation of the non-functionality rate results under the WRI that the regional government was interested to find ways for improving access across the region.

An appraisal exercise can comprise an array of processes of varying degrees of formality that proceed on in parallel. During the WRI data collection process, *woreda* level WME office staff members assessed additional aspects related to water access, such as whether WASH committees were active, reasons for scheme breakdowns, and used the inventory as an opportunity to renew contacts. In addition to the inventory parameters, I documented various informal, ongoing monitoring and feed-back processes between the *woreda* WME office and users and an absence of formally codified monitoring procedures. For example, *kebele* officials reported breakdowns of water schemes to WME staff members; and WME staff carried out routine checks on schemes en route to other duties. This again indicates that the notion of PM as a single linear process does not hold; rather, it is a multiple parallel appraisal process whose results contribute to constructing a body of knowledge. A selected subset of results is fed upwards through formal PM-related channels. However, even in this informal monitoring, local framings of access are narrow and do not reflect the concerns of women and girls who are chiefly responsible for providing and managing water at home.

9.1.3 Examining the relation between monitoring results and decisions on access

My third line of investigation addressed the assumption that there is an essentially linear determining relationship between PM and associated decisions, represented in the RBM model results chain. In order to test whether the validity of this assumption in the case of monitoring rural water access in Ethiopia, I addressed research sub-question 1c):

What is the explanatory power of performance monitoring results for decisions taken on access to rural water supply?

To answer this question, I investigated the mechanisms shaping specific decisions on rural water access. To test the often-presumed linear relationship between monitoring results and decisions taken, proposed by the RBM model, I paid particular attention to whether the role of PM was a necessary, sufficient, or merely a contributory factor. Aspects of decision-making related to rural water access that I investigated in particular in my case study were: (1) budget allocations to rural water; (2) strategic planning for rural water; and (3) two specific examples in my case study *woreda* that allowed me to study in detail different factors affecting decisions. The first example was the WWT's decision to reallocate existing sources of funding to maximise benefit for all *kebeles* in the *woreda*. The second example concerns the repair of a particular rural water scheme, the Chinese well in my case study lowland *kebele*.

The following findings emerge from my research.

The very complex mix of financing modalities for rural water in Ethiopia is an obstacle to creating a direct link between monitoring results and budget allocations. The Ethiopian rural water sector is highly aid dependent with more than 50% of its financial resources coming from budget sources external to the Ethiopian government in 2008. In 2009, there were eight parallel financing modalities with different rules attached, that locked financial resources for rural water supply into specific arrangements. The various conditionalities imposed by external

financing modalities had the effect of delinking performance-related information from budget allocations for rural water access, particularly for capital funding, where the proportion of external funding was even higher. For example, in the Southern Region, sector donor programme funding was allocated in a project-type arrangement to specific intervention *woredas* over periods of several years. Capital budget under multi-sectoral funding programmes, such as the PSNP, was allocated based on criteria independent of water access, namely chronic levels of food insecurity. Furthermore, capital budget under this source catered only for low-cost technologies, which are not a viable infrastructure for all geographic areas in the region. The location of NGO projects was subject to many different factors that mediated and, at times, overruled existing water supply service levels as a criterion for funding.

The regional and *woreda* governments' control over capital budget for rural water supply was weak. Capital funding allocations for rural water by the Ethiopian Treasury were small for the regional BoWR. Because of the way in which donor and NGO-related capital financial resources were locked into specific *woredas* over different time frames, the region's leeway for strategic allocation of financial resources based on performance information was fairly limited. Because of general budget deficits, *woreda* governments allocated virtually no capital funding from treasury sources to rural water supply. Sector donor funding from the WB WASH Programme was constrained by an across-the-board budget ceiling per *woreda*, and capital funding allocations to rural water under the multi-sectoral PSNP were subject to a number of administrative and political considerations independent of water supply service levels. Allocation of NGO funding to rural water remained also largely outside the remit of *woreda* governments. Overall, my findings indicate that neither the regional nor *woreda* governments had fair control over capital budgets to rural water, which limited their scope for strategic planning, as discussed below.

The scope for strategic planning at regional and *woreda* level is very limited. A study of the BoWR's five-year strategic planning process 2006-2010 (Amberbir, 2007) found that this was largely a token exercise. The strategic plan preparation could not rely on sufficient performance-related information, was not backed up an appropriate budget, and was based on centrally pre-defined targets that were out of touch with the rural water context of the Southern Region. In my case study *woreda*, I identified three planning processes and four funding channels for rural water. There was a mismatch between the levels of funding provided and planning and reporting requirements related to each source. For instance, under the *woreda* block grant for water supply, which came from the Treasury, there was no capital funding allocation; World Vision, an NGO operating independently of the government's planning and budgeting cycle, was by far the largest source of funding to the sub-sector. The WME office was required to submit three separate plans - one to the *woreda* government, one to the WB WASH Programme, and one to the PSNP. While staff members were able to fulfil the requirements related to specific programmes, these 'strategic' planning exercises were piecemeal and had the character of meeting an obligation. The reality of 'strategic' planning in my case study sites provides further evidence the linear model in RBM is not representative of practice in the Ethiopian rural water sector.

'Muddling through' involving bottlenecks and 'windows of opportunity' related to different financing modalities most accurately describes the policy model in my case study *woreda*.

The policy model that describes the situation in my case study *woreda* rather than the linear concept in RBM is one of 'muddling-through' (Lindblom, 1959). The WME office navigated its way past the bottlenecks, taking advantage of the opportunities provided by different funding sources, in order to improve rural water access across the *woreda*. For example, the WME office applied for funding from the PSNP and the WB WASH Programme for major repair works across the *woreda*, and whichever source came through, it was used to do the repairs. The budget reallocation across the *woreda* to provide a more popular technology option to the

lowland *kebeles* is another example. Originally, a consultant to the WB WASH Programme had pushed for provision of the unpopular hand-dug wells in the lowland *kebeles*. During a period of inaction in this project, several changes took place. The consultant's contract came to an end, which changed the actor dynamics related to this decision; the capacity, skills and confidence of the WME office increased; and funding by World Vision allowed for the preferred technology choice of residents. The additional funding created a window of opportunity for the WME office to reallocate WASH Programme funding. The results from my tracing of this process confirm that policy processes are not driven exclusively by a uniquely rational model and in this sense are not linear, but an outcome involving more diverse continuous negotiation based on changing power dynamics. The tracing of the process leading to the original decision and its reversal shows that decisions are influenced by multiple factors.

The decision to repair the Chinese scheme in the lowland case study *kebele* exemplifies the multi-causality of decisions. A detailed study of the specific decision to repair the Chinese scheme shows that multiple factors - some enabling and some constraining – interacted to achieve eventual repair to the scheme in May 2010, after four years of non-functionality. Constraining factors include lack of capacity to properly operate and maintain the scheme in the local WASH committee. Abuse of roles and weak financial management were among the internal dynamics that further jeopardised a sustainable water service from this facility. The wider policy environment did not provide the necessary support structure, oversight or direction to the WASH committee, in the form, for instance, of institutionalised training and oversight of financial management. Factors enabling the repair included the agency of a local resident who took various steps to support the WASH committee, for instance, raising funds to pay for the repair work. The WME office, on its part, mobilised capital funding to purchase three reservoirs and provided repeated follow up with the regional maintenance team at the BoWR to do the repairs. The regional maintenance team received formal (WRI based) and informal (phone calls from WME office to follow up) information about the breakdown of the

scheme and undertook its part in the repair. The positive response of the BoWR was facilitated also by the accessibility of the scheme (its location on the main road connecting the sub-regional capitals) and the strong support of the WME office to enable the process. Finally, the approaching federal elections led to residents being more vociferous about their discontent, in official meetings. This was the motivation for additional repair works to render the Chinese scheme operational, which were completed two weeks before the elections.

Appraisal results are a contributory factor and may be a necessary factor in decisions. Among the constraining and enabling factors that influenced the repair, appraisal results (here the WRI results), were not a sufficient factor to explain the repairs to the scheme. However, the WRI results and the related BoWR commitment to increase the functionality of schemes across the region, certainly facilitated the repair works, which characterises them as a contributory factor. They can be interpreted as a necessary factor since, without the formal WRI results and related budget increase, the BoWR might not have made its contribution to the repair works. Compared to the RBM model, which assumes a linear link between appraisal results and decisions, this detailed examination of the process related to a particular scheme breakdown and repair shows that many other factors act as intervening variables.

Tackling the root causes of poor functionality is related to an understanding that goes beyond performance monitoring and depends on reforms to sector-wide service delivery models. The WME's construction and rehabilitation of schemes and the WASH committee's planned capacity building activities were the result of a five-year process of building knowledge about water access needs across the *woreda*. Regular results-based information was at the tip of the *woreda* WME office's overall broad knowledge base. However, despite WME officers' awareness of the many access problems related to poor governance of schemes, their scope for taking action to tackle these issues was limited by the lack of dedicated funding budget and sector-wide regulation and guidance. The WME office's limited ability to address

the root causes of scheme breakdowns reflects the wider problems related to the dominant service delivery mode represented by a project-cycle and subsequent CBM (Community-based Management) (Harvey and Reed, 2004, 2007, Lockwood and Smits, 2011).

9.1.4 Drawing together the findings from the three lines of investigation

So, what role does the linear model underlying PM play in shaping policy decisions on access to rural water supply in Ethiopia? This thesis provides evidence, triangulated from three different lines of investigation and based on case studies and documentation from international sources and from national, regional, *woreda*, *kebele* and household levels in Ethiopia, to argue that the role that PM plays in policy decisions is limited. First, the linear model only provides an understanding of access that does not adequately represent peoples' lived access realities in my case study areas. Second, rather than following a linear process, PM is shaped by actors' rationales. Subject to their instrumental or substantive rationales, actors frame inputs into appraisals and close them down to different appraisal outputs. Third, the contribution of PM to shaping policy decisions is limited in the sense that it interacts with other factors affecting specific decisions in concrete policy settings. To explain how I arrive at this conclusion, I briefly revisit my three lines of investigation and how they, in combination, support this finding.

The first line of investigation focused on setting objectives in PM. I investigated whether the framings of access under PM reflect notions of water access based on peoples' lived experience. My findings show that both the JMP's reference to 'access' as access to an 'improved' source, and the MoWR's 'scheme potential' parameters focus on one-dimensional, technical aspects of access, namely the infrastructure in place. I argued that these formal framings reflect a technical mindset. I showed that the goal of PM in relation to achieving access is driven by the methods used to measure it – whether the infrastructure or the WHO volume and distance guidelines. This suggests a circularity between framings of the inputs to and objectives of appraisal, which translate PM into a process of image management. In this

self-referential process, a particular image of the world determines the meaning of performance, which is used as a yardstick. The power of this dynamic was clear in Ethiopian stakeholders' characterisations of access, which, even when critical, revolved narrowly around the dominant parameters of infrastructure, volume, distance and water quality. This one-dimensional and technical framing of access, constantly reproduced in self-referential monitoring circles, contrasts starkly with the multi-dimensional and dynamic nature of water access experiences among local residents in Ethiopia. My observations in Ethiopia, which find strong support in and are complemented by the wider literature on Ethiopia and other countries, suggest that access is mediated by patterns of water availability, peoples' water needs, and governance factors. In Ethiopia, patterns of water availability vary widely - geographically, along the country's agro-ecological zones and within and between years. Peoples' demand for water spans the domestic and productive uses, and depends on their livelihoods, wealth status and the coping strategies available to them. Therefore, depending on settlement patterns and availability of alternative sources and livelihoods, the pressures on an 'improved' scheme can vary greatly within the same location. In addition, governance factors, including power relations, affect access to individual schemes and can lead to the exclusion of vulnerable and marginalised groups and individuals. Therefore, the current framing of access embedded in national and international monitoring routines, does not form an adequate basis to understand peoples' felt access experience.

The second line of investigation focused on the power and political dynamics of PM processes. I highlighted that monitoring processes can involve contestations over data and calculation methods – for example, the case of regular reporting in the Southern Region, the intervention of the Minister to impose his interpretation on the WRI results, and rows over internationally reported JMP figures versus national figures reported by MoWR. This emphasises the political nature of monitoring processes and the wider governance debates surrounding them. My focus on the – instrumental, normative and substantive – rationales behind the access

framings of different individual actors shows that powerful actors can manipulate appraisals to justify their private, favoured ends even when these are at odds with official appraisal objectives. This is exemplified by the Minister's closing down of WRI results to obtain a result that portrayed positive progress towards 'universal access', and the actions of the consultant who overruled residents' preferences in favour of low-cost technologies implemented in the accessible lowland areas, to provide that promised a good budget utilisation rate. These examples show that PM can be understood as the 'performing of monitoring', on a stage where different actors (stakeholders) perform according to their particular individual objectives and interests. When actors pursue a substantive rationale of increasing their understanding of a situation, then one can speak of 'monitoring performance'. This was the case for the regional WRI where the analysis team compared different analysis methods to identify which most adequately represented the access situation on the ground. A substantive rationale was also reflected in the regional cabinet's decision to increase the sector's maintenance budget based on the finding that non-functionality was an important factor affecting access in the region. At the same time, I highlighted that numerous less formalised monitoring practices proceed in parallel with the formal PM process. These practices range from enquiries made by sector professionals when completing formal questionnaires, to informal, day to day interactions between sector staff, WASH committees and other government stakeholders. The results of these informal monitoring activities combined with wider learning builds to form body of largely 'tacit' knowledge that informs the WME office's work. It is this wider body of knowledge, rather than only formalised PM results, that informs decisions, as I showed, for instance, in my description of the reallocation of WASH Programme funding from the lowlands to the highland *kebeles* in my case study *woreda*. This means that the role PM plays in taking policy decisions depends, at least in part, on actors' rationales.

The third line of investigation concerned the role of PM results in decisions about access. To understand whether results-based information provides an adequate basis for understanding

decisions, I analysed whether they are a contributory, sufficient or necessary factor. I looked at examples of budget allocations and strategic planning, and traced the intervening factors pertaining to two specific decisions in my case study *woreda*. In my study of budget allocations and strategic planning at regional and *woreda* level, I found, *inter alia*, that, to an extent, due to the limited control over capital budget allocations for rural water supply at both levels, that strategic planning at the regional level is often a rubber stamping exercise, while planning in my case study *woreda* can be best characterised as a process of ‘muddling through’. These findings refute the assumed linear relationship between PM results and decisions taken proposed by the RBM model ‘results chain’. In the case of two specific decisions, my tracing showed that PM results were a contributory factor. In the case of the Chinese scheme repairs, PM in the form of the WRI results, was necessary for the regional BoWR maintenance team to carry out its part of the repair, but was not sufficient to make the repair happen. A number of other factors intervened in a repair process that extended over several years. The process was affected by the wider policy context (lack of operationalisation of the CBM model), weak management by the WASH committee (lack of capacity and misuse of power by committee members), material conditions (lack of funding to replace the leaking reservoir), and windows of opportunity (the approaching general elections). My findings from this third line of investigation thus show that the relationship between monitoring results and decisions is mediated by many factors.

9.1.5 Performance monitoring and public accountability

An important argument for the introduction of PM in the public sector is the expectation that it increases accountability. In development cooperation, PM was introduced under Principle 5 ‘MfR’ (Managing for Development Results) of the aid effectiveness agenda. In the Ethiopian water sector, reform processes were aimed at increasing the PM focus in the development of a common monitoring framework for WASH (water supply, sanitation and hygiene) stakeholders, introduced as a result of the National WASH Inventory carried out in 2010-11. The micro and

meso level case studies that informed this thesis research provide snapshots of the specific dynamics that are part of this wider process towards streamlining monitoring across WASH. PM allegedly contributes to increasing public accountability by providing development targets and, in a seemingly objective fashion, measuring progress towards them. My research highlights that the ostensibly objective and uniquely rational logic on which the pledge for accountability is based, needs to be questioned. This is evident also in the latest developments of the National WASH Inventory: at the time of writing, in mid-December 2012, some 1.5 years after data collection was completed, the inventory results have not been published. The MoWE gave a presentation of the preliminary results to development partners, but they are strictly confidential and not to be shared or used. Confirmation of the figures based on an internal validation process with regional governments was still pending.⁸⁵ This shows that, far from being neutral, the National WASH Inventory results are highly political and their usefulness diminishes with the time lag between data collection and their publication. In general terms, the emphasis on transparency and accountability has put monitoring on a public stage, while power struggles and negotiations based on actors' intentionalities, continue behind the scenes. For development partners, particularly sector donors who align their funding sources with the GoE's budget, monitoring and planning procedures, the National WASH Inventory provides 'weak justification' (see Stirling, 2008, discussed in Chapter 4) – it demonstrates adherence to PM principles which drive public accountability in their home constituencies enabling the bureaucrats to defend themselves against potential accusations of misuse of funds. For citizens, whether givers or recipients of aid, increased adherence to accountability via PM and RBM has had little immediate effect, and allows them scrutiny only of abstract figures on access. According to the evaluation specialist, Roberto Picciotto (2003: 228), "[a]ll too often policy makers use statistics as drunken men use lamp posts – for support rather than illumination". So, why does the rational policy model persist? In the next section, I

⁸⁵ Personal communication with a locally based sector specialist who I had interviewed previously during the course of my field work (Interview #99)

discuss a number of factors that contribute to the ‘stickiness’ of performance monitoring of rural water supply.

9.1.6 Why does the rational policy model persist in my case study?

In answering this question, I return to Robert Gregory’s contribution to the policy process literature. He highlights that the rational policy model is a normative framework rather than a description of the real world (Gregory, 1998). His observation is in line with Herbert Simon himself, who, in his later works, acknowledged that actors take decisions based on ‘bounded rationality’, choosing policy options that are “good enough” (Hill, 1997: 101) rather than uniquely rational. A key attraction of the rational policy model, here PM, and therefore one possible reason for its persistence, is that it reduces complex reality to a manageable set of objectives to be verified via measurable indicators, as I observed in Chapter 3 and Section 9.1.5. In public sector reform processes such as the aid effectiveness agenda, a commonly stated role of PM is to increase public accountability. Although real policy processes do not follow the ideal, rational policy model, people are locked into these policy processes and face the dilemma of having to demonstrate their performance. In my case study I interpreted the concern of donor organisation representatives with the implementation of a PM process in Ethiopia as an indication for this. Donor organisations, driven by their own accountability agendas such as the public service agreements that DFID is subject to in the UK, pass on these priorities to recipients of aid, here the MoWE. In Ethiopia, this is evidenced by the drawing up of successive PM frameworks with the support of external consultants and the important financial contributions by sector donors to the implementation of the National WASH Inventory. The Ethiopian MoWE, for its part, was driven by the ambitious policy target of achieving universal access to water supply to show positive development results. One role of PM is thus to legitimise policy decisions, a point discussed also more broadly for aid policy and practice (Mosse, 2004).

At the same time, one could argue that there is also genuine concern among the development community to make development cooperation more rational. An example in the Ethiopian water sector is the effort to bring different planning, monitoring and funding streams together under the unified ONE WASH Programme that I outlined in Chapter 3. An alternative explanation of why the rational policy model persists despite evidence that it is hard, if not impossible to implement (Mosse, 2004) lies in the tension between the intention to act rationally while, at the same time, facing a messy political reality.

Contributions from the politics of the policy process offer further explanations the ‘stickiness’ of the rational model in the case of PM of rural water access in Ethiopia. Following Maarten Hajer’s (1995) argumentative turn, the RBM principle under the aid effectiveness agenda provides a storyline that constructs a common understanding of how things should be. In the water sector, this story line is represented in the policy documents and related studies at international and national levels, quoted at the end of Chapter 3. The story line suggests that water sector governments need to improve their PM practices to improve planning and budgeting of rural water supply interventions. This story line is ‘reified’ through the way people talk (Hajer, 1995: 57) at sector meetings such as the national Multi-Stakeholder Forums in Ethiopia, or at regular government-internal sector review meetings where progress in achieving universal access is discussed. The story line is further upheld through routinised sector monitoring practices. These regular monitoring exercises, for their part, are linked to administrative incentive structures and funding streams that are part of the hardware-based project delivery cycle of rural water supply. Because of the delivery model of providing hardware projects in rural water supply, monitoring practices have become locked into a particular path (David, 1985), which focuses on the technical, hardware outputs. Aspects of rural water supply access that are not measured by the technical indicators used in Ethiopian sector monitoring processes, remain largely invisible, as shown in the dominance of formal rural water access framings among sector stakeholders in Chapter 6. This dynamic reinforces

the self-perpetuating character of PM, particularly at higher levels of the administration, where access is mainly expressed in abstract percentage figures, relatively removed from lived realities, also demonstrated in Chapter 6.

In Chapter 8, I provided evidence on the real constraints that compromise the ideal sequence of basing planning and budgeting processes on monitoring results in the case of rural water supply in the Southern Region. Nonetheless, street-level bureaucrats (Lipsky, 1980), here *woreda* WME officers, are obliged to abide to the rational monitoring, budgeting and planning rules to enhance their chances to receive budgets. When a budget is received, *woreda* WME officers accommodate various interests and constraints in implementing water supply services (Hill, 1997, Keeley and Scoones, 2003c). An example of accommodating these interests and constraints is the shift of the WB budget from the lowland to the highland areas discussed in Chapter 8. This budget shift happened because of the additional funding that became available from a local NGO, and because of a change in the constellation of actor coalitions when the influential WSG (*Woreda* Support Group) left the *woreda*. The priority given for implementing water supply to the birth place of the *woreda* administrator in the highlands is another example for an accommodation of interests in concrete policy settings.

9.2 Contribution to knowledge

My research contributes to three bodies of knowledge: the STEPS Centre's research on 'social appraisal', the sociology of water studies particularly the politics surrounding water access, and the concept of PM with specific reference to the aid effectiveness agenda.

My findings advance the STEPS Centre's research on 'social appraisal' by providing additional evidence and deepening and refining some of the related concepts. The evidence in this thesis strengthens and throws more light on the importance of actors' rationales in appraisal

processes and their results – independent of particular formal appraisal methods and results (see Stirling *et al.*, 2007: 45). My case study evidence deepens some of the aspects related to the STEPS Centre's concepts I employ.

I identified a circularity between objectives and methods in actors' framings in definitions of rural water access: the common framings based on 'infrastructure' and 'volume- distance' parameters enforce specific methods for assessing access. This circularity between setting targets and measuring progress towards them creates a self-referential monitoring cycle that is removed from the realities on the ground. This circularity can be seen as image management (Power, 1997) in which indicators of performance replace truth (Lyotard, 1996), which enables 'monitoring performance'. Formal appraisal, such as reporting of national access figures based on the official calculation methods devised by the MoWR, serve mainly to portray Ethiopia's access situation in a specific way, in order to satisfy some abstract, upward accountability. I refer to this dynamic as 'performing monitoring' (as opposed to 'monitoring performance') because it can be likened to an act of stage management. In parallel, some aspects of appraisal are driven by substantive rationales – such as the WRI in the Southern Region. These may provide factors necessary to explain associated social commitments such as the regional government's rise of a maintenance budget for the BoWR and accelerated repair activities based on the WRI results.

My findings highlight also that social appraisal processes, of various degrees of formality, occur in parallel. Formal appraisals, such as the WRI or regular reporting, are at the tip of an iceberg of local day-to-day monitoring activities forming a larger, mostly 'tacit' body of knowledge on which actors draw in taking decisions. Decisions about access are informed by this wider body of knowledge, not just formal appraisal results, and by other factors intervening in the forming of social commitments. It is necessary to understand factors outside a given appraisal exercise or method (such as PM), in order to understand the forms taken by social commitments. This

applies especially if the aim is to respond substantively to local needs rather than to comply instrumentally with other interests. For example, WME officers were able to allocate financial resources to maximise the benefits for residents across the *woreda*, based on knowledge accumulated over several years and a number of appraisal processes of various degrees of formality.

My findings contribute also to the political sociology of water resources management in relation to the framings and politics surrounding rural water access. I confirmed many issues identified in the literature, such as people's lack of differentiation between water for domestic use and for productive uses, use of multiple, protected and unprotected sources to cover water needs (Moriarty *et al.*, 2004, Van Koppen *et al.*, 2012), and a flawed dominant service delivery model of CBM (Agrawal and Gibson, 1999, Harvey and Reed, 2004, Lockwood and Smits, 2011) that takes account of affordability and cost recovery (Fonseca and Njiru, 2003, Cleaver and Toner, 2006). I observed inequity and social exclusion (Cleaver and Toner, 2006), token participation (Manor, 2004, Jones, 2011) and an attitude to gender relations that disregards women's and girls' perspectives (Mehta, 2005, Wallace and Coles, 2005, Zwarteveen, 2008). My contribution here is in highlighting the stark difference between monitoring and inventorising water supply infrastructure, viewed through a one-dimensional and technical lens, legitimised and reproduced through PM cycles, which contrasts to the much more dynamic relationship between water availability and users' needs.

The final contribution of this thesis research is that it opens up a space for discussion of the politics underlying knowledge production in PM under the aid effectiveness agenda. In particular, I questioned the adequacy of the ways that 'access' is framed in formal PM interventions, and the conventionally presumed logic of PM as providing a single, definitively rational basis for decisions. My study introduces the idea that interests and rationales

embodied in the framings of powerful actors play a key role in appraisal processes, conditioning their outputs and thus shaping resulting social commitments.

9.2.1 Generalisability of my research findings

James Scott (1998: 27) writing about the politics of measurement in early modern Europe said that: “Every act of measurement was an act marked by the play of power relations. To understand measurement practices ... one must relate them to the contending interests of the major estates”.⁸⁶ This historical reference highlights that measurement is always likely to be political. Therefore, by questioning the commonly held assumption in RBM that PM provides an objective, rational basis for policy decisions, my study results are applicable across the public sectors where PM is applied in a seemingly neutral fashion. Although my study addresses the particular case of PM of rural water supply in Ethiopia, it is concerned with the wider practice of PM methods. The focus on this particular context opens space for debate on the applicability of the findings and assumptions to other cases. My findings are generalisable in the sense that the understandings provided in this thesis raise questions that potentially are salient to rural water supply sectors more widely, and to the management of development initiatives in other highly aid dependent countries, where PM methods are used.

9.3 Outlook

A global process of reflection is currently underway to develop a future sustainable development framework that replaces the MDGs. With regard to water supply, sanitation and hygiene, in May 2011, the JMP launched a global stakeholder consultation (WHO and UNICEF, 2012c). Within this consultation process, working groups have reviewed existing targets and

⁸⁶ Scott (1998: 28) describes the following micropolitics of measurement using the example of basket sizes as representing arbitrary changes in measurement units: “The local lord might, for example, lend grain to peasants in smaller baskets and insist on repayment in larger baskets.”, and to the manipulation of an existing measurement unit: Virtually everywhere in early modern Europe there were endless micropolitics about how baskets might be adjusted through wear, bulging, tricks of weaving, moisture, the thickness of the rim, and so on”.

indicators, including those for water supply, and suggesting future monitoring options. The consultation document concerning water supply recognises that many aspects concerning the human right to water, namely drinking water quality and accessibility, reliability, affordability, sustainability and equity in access to water supply and sanitation facilities, are currently neglected (WHO and UNICEF, 2012c). In the review process, working groups are asked to respond, to the extent possible, to the various aspects proposed by the normative criteria set out in General Comment 15 on the human right to water. It suggests specific attention to addressing inequality issues through the establishment of a cross-cutting working group on this topic. Current proposals for future targets aim to set a 'target ladder' for progressive advancement to achieving the human right to water, rather than the single target of this right. There is also a noticeable change in the language used in the draft proposals, to highlight the notion of 'services' compared to the previous focus on 'infrastructure' (WHO and UNICEF, 2012a).

The suggestions currently proposed within the JMP's global review process are encouraging. My findings related to Ethiopia regarding the circularity of framings indicate that global standards and targets, in the past, have been highly influential for framing notions of access among sector stakeholders. A global shift towards a broadening of the inputs to appraisal to achieve a more nuanced understanding of access might encourage similar reflections at the national level, thereby contributing to breaking break the self-referential monitoring cycles documented in this thesis and bringing together perspectives on access from above and below. In the short section on policy recommendations below, I provide suggestions related to my findings in Chapters 6-8 on actors framings, the political and power dynamics of monitoring processes and on the relation between monitoring and decisions taken.

9.3.1 Policy recommendations

My findings indicate that it will not be sufficient to set more nuanced and representative global targets. Regardless of specific targets, actors with different rationales, will present

different interpretations to fit with the access stories that reflect their privately-favoured ends. Understanding the political and power dynamics underlying PM, in a concrete setting, therefore, remains an important endeavour. In the context of this research, paying attention to actors' rationales and ways of manipulating the inputs into appraisal exercises may illuminate some of the politics underlying the knowledge production processes in specific settings. In addition to more inclusive global monitoring targets for rural water access, a critical and reflexive engagement with monitoring processes in local settings is necessary.

One concrete activity to widen the inputs into appraisal would be a purposeful inclusion of the perspectives of those who are living the daily reality of accessing water – women and girls, boys and men drawing water from schemes for their livelihood purposes. Some aspects that appear important based on my analysis of a very limited subset of daily water access situations highlight the governance of rural water supply schemes and the representation of gender therein. This includes attention to whether formal scheme management requirements such as the election of a committee, are in place, the role of women therein, and to the actual implementation of those rules and procedures, in particular of financial resources. My findings also highlight the importance of processes that foster a mutual understanding and collaboration between WASH committees and WME officers to support the smooth running of scheme management. Providing very basic inputs such as sufficient fuel and per diems to enable officers to visit WASH committees is an essential first step to enable such interactions to unfold.

With regard to the politics and power dynamics in monitoring processes, my thesis' findings point to the importance of 'tacit' monitoring. In the sector monitoring processes investigated in this thesis much emphasis is directed towards needs of aggregate data at the top of the administrative hierarchy. In applying some of the lessons from the importance of tacit monitoring processes, more attention could be given to the data needs of street level

bureaucrats and their active involvement in data collection and analysis. For example, one could explicitly rely on WME officers in inventories for data collection and analysis, which would also provide opportunities for them to increase and update their knowledge about water facilities and to refresh their links their constituencies in the course of conducting the inventory exercises. In the National WASH Inventory, this aspect was not appreciated and, in various locations, WME officers were not part of the data collection team (Welle *et al.*, 2012). Going one step further, sector actors could work with *woreda* WME officers to improve the design of monitoring processes relating to data collection and analysis with the intention to bring the perspectives of the main collectors and managers of water to the fore and to encourage better appreciation of the interrelation between water for domestic and productive uses by water supply and irrigation units. As a way of directing street level bureaucrats' rationales in appraisal towards substantive ends, one could work at fostering a sense of partnership between those who draw water from rural improved schemes, WASH committee management structures and government representatives who are tasked to support the sustainability of these services.

However, there are no easy solutions for making appraisal designs and practices more reflexive: they are down to the agency of individuals in relation to how narrowly or broadly they frame the inputs into appraisal and how they enable the 'opening up' or 'closing down' of results to wider governance. A recent initiative by the NGO Daraja in Tanzania, was aimed at increasing accountability of local government, by encouraging citizens to report water scheme breakdowns via SMS. However, this initiative was not successful: Daraja attributes some of this failure to technical issues, and also highlighted cultural barriers to a Western-inspired concept of citizen engagement and empowerment (Taylor, 2012). Daraja's normatively inspired design of a feed-back mechanism to improve accountability clashed with local attitudes on how to (or not to) criticise government under prevailing societal hierarchical structures. A complementary

way of addressing these dynamics relates to addressing wider political economy questions that touch on the relationship between rural water access monitoring results and decisions.

My findings of Chapter 8, which examined this relationship, clearly show the importance of political economy factors, including how the sub-sector is organised, that hinder 'access to water supply'. In particular, the continued prevalence of a 'design and build' mindset, and the path dependencies in the sector created by many decades of working in a project delivery mode, have locked the sub-sector into a way of working that is proving to be unsustainable.⁸⁷ The related self-referential and one-dimensional monitoring cycle is just one part of a much larger picture. A focus only on monitoring and no questioning of the wider political economy in which the process is embedded, will not be sufficient. In order to move away from the project delivery mode, the mindset in the sector needs to change. There are some indications that this is slowly happening, for instance indicated in the use of language in the JMP consultation document referred to in the beginning of this section to 'services' and 'sustainability'. However, changing language does not yet translate into new actor coalitions and a different organisation of the sector. Overcoming the path dependencies, particularly those embedded in existing organisational incentive structures and funding streams may require a perception of crisis to open up a new policy space, highlighted as a key input for sector reforms by Grindle and Thomas (1991). As a starting point, I suggest improving the evidence base on the functionality of water supply schemes and on access dimensions that go beyond the technical level. Furthermore, very basic improvements of street level bureaucrats' working conditions such as filling the available staff positions, providing sufficient fuel and per diems and extending government extension services to the *kebele* (sub-district) level are needed in combination with the suggestions related to monitoring made above.

⁸⁷ Current debates in the sector point to a shift in mindset towards a 'service delivery' approach. However, whether this will lead to a fundamental overhaul of the currently dominant way in which the sector is organised, remains to be seen.

I conclude with the perspective from a *woreda* WME officer. Participants in a workshop in May 2011 entitled *What next after the National WASH Inventory?* Were asked to summarise, in one word, what the inventory meant to them. Among the many expected answers such as “information”, “WASH data”, “significant for UAP”, “coverage [access] clarification”, “water equals 1.5km”, “knowing the coverage”, “useful for planning”, and so on, a *woreda* WME officer wrote down the word “love”. When asked what he meant by this, he explained that “we need to love the people in the rural areas so that we can do good work”.⁸⁸ This officer’s attitude, which reflects my personal experience of many other WME officers across Ethiopia, is encouraging. It is a good entry point for working with stakeholders to put substantive rationales at the centre of future appraisal exercises.

⁸⁸ In his explanation, the officer referred to the tiring work of inventorising facilities and of assessing and repairing broken-down schemes in areas that are difficult to reach and for communities that often do not have sufficient resources to pay for spare parts.

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10 Annex 1 – Interview guide: framing and monitoring activities

Interviewees: government officers of Ministry of Water Resources at federal, regional, zonal, woreda levels; if applicable, government officers of Ministry of Finance and Development; NGO monitoring experts / directors; donor representatives responsible for water interventions, water users

Introduction / general

- What is the interviewee's professional background and employment history?
- How long has the organisation been active in Ethiopia?
- When was the water programme established?
- Where are they active (regions, woredas) and what is the scope of their interventions?
- What is the organisation's approach to providing water supply and sanitation?

Framing

- How does the organisation / individual define access? How is access measured? How does the individual explain his/her definition of access?
- Who is responsible for which tasks in rural water supply?
- What is the biggest problem with access to water supply (and sanitation and hygiene)? How does the organisation deal with that? What do you need to take into consideration to provide access to water supply?

Monitoring approaches

- What is their approach to monitoring & evaluation?
- What is the purpose of monitoring?
- Which indicators are used / what parameters / aspects are monitored?
- Who is involved in monitoring?
- What is the process of monitoring like?
- What is the biggest challenge in monitoring?
- What has the organisation changed based on monitoring?

Past decisions with regard to rural water supply

- Has the organisation taken any decisions based on monitoring results?

Recent issues in the water sector

- What is the organisation's opinion towards self-supply?
- Does the organisation have an opinion on the national M&E strategy? Do they intend to engage? How?
- Any other organisations that have interesting approaches to monitoring?
- Anything else the interviewee would like to add?

11 Annex 2 – Interview guide: water sector monitoring history, accountabilities and incentives

Interviewees: government officials, NGO representatives, donor representatives

Explore: reasons, feelings, opinions and beliefs – content mapping: widening: why? Perspective-widening: are there any other aspects / factors etc; people talk a lot about... what is your opinion? You were very positive about this but were there also any shortcomings? Content mining: could you tell me why this was important? How did you respond when? Why? What was it that made you decide...? Explain language further when there are any crucial terms

Introduction

- What is the interviewee's professional and employment background?
- Since when in the ministry or what relation to the ministry? Which processes involved?

Institutional development of the water sector

- What are the main institutional developments in the water sector from the 1960s onwards?
- What are the main policy documents with regard to water supply (and sanitation?) and water resources management?

History of purpose of monitoring in the water sector

- What does monitoring mean? What is the purpose of monitoring? Why is it important? Difference between financial and progress reporting and WASH monitoring? Relationship between the two processes
- Definition of access – how has it changed over time?
- Development of indicators, policy debates around access

Wider governance issues with regard to monitoring access to rural water supply

- Challenges related to Universal Access Programme, how does monitoring respond?
- Business Process Re-engineering and motivations / ownership of employees with regard to monitoring
- How does water fit within the wider development agenda (PASDEP)? Has that relationship changed over time?
- Relationship between ministry / minister and prime minister?

Accountability structures

Government officials

- Who are you reporting to? How often?
- Can you explain the process [captured by monitoring activity]? Are there important stakeholders for your report outside the ministry itself? Who are they? Why are they important?
- Are there any sanctions or positive feed-back mechanisms based on monitoring results?
- Can you give me an example?

NGO monitoring experts

- Who do you report to? How often?
- Are there important stakeholders for your report outside the ministry itself? Who are they? Why are they important?
- Are there any sanctions or positive feed-back mechanisms based on monitoring results?
- Can you give me an example?

WASH Committees / Users

- Do you report to someone? What do you report and when?
- Have there been any issues with regard to the water supply scheme in the past?
- What have you done in order to solve this issue?
- Have you reported it to someone? Who? Why this person? What happened?

Decisions with regard to rural water supply

- What are the priorities of the organisation / office with regard to rural water supply this year?
- How did these priorities come about?
- Do you have a plan for water supply & sanitation in this year? Can you show it to me? How did this plan come about?