Beyond the buzzwords:

Sustainability and gender dynamics of a rural town water supply system in Lemi, Ethiopia

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Master thesis International Development Studies

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August 2021

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Abstract

In the past 30 years NGOs in Africa transformed themselves from idealism-driven philanthropic organizations into globally acting international development agencies. Today, humanitarian organizations receive increased funding from institutionalized donors such as governments and international organizations. Despite the constant use of buzzwords for longterm goals like „sustainability" and „empowerment" in their communication, these organizations are under immense pressure to deliver quick results and satisfy their donors needs in order to exist. The upward accountability towards donor institutions is contradictory to the NGOs self-proclaimed closeness to „the poor". This thesis examines how an NGO seek ensure sustainability of a water project funded by the German government. As a practical example a field research in the rural town Lemi in Amhara Region, Ethiopia was conducted where the German NGO „Menschen für Menschen" (MfM) constructed in 2018 a rural town water supply system. The data for this research was collected through the review of policy documents and qualitative research among beneficiaries, WASH committee members and NGO staff. The research has identified discrepancies between NGOs assumptions of sustainability as well as female empowerment and the reality in the field. MfM is using participatory approaches (i.e. involvement of the community, trainings etc.) to create a sense of responsibility and ownership among the community in Lemi. However, the technocracy and usage of blueprint approaches in order to complete the project in the given time and financial frame doesn't ensure a longterm operation of the water supply system. Furthermore the NGO assumes that the improved access to water and the involvement of women in the resource management will strengthen their standing in the community. The approach of MfM to involve women in water supply related duties has not had a significant empowering effect (in the Freirean sense) because for them this was seen as a necessary service for the community. However, the technical failure of the water project and the setback for the women, triggered unexpected forms of social transformation.

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List of abbreviations

ABOFED	Amhara Bureau of Finance and Economic Development
ABOWRD	Amhara Bureau of Water Resource Development
BPD	German Federal Agency for Civic Education
BMZ	German Federal Ministry for Economic Cooperation and Development
CSA	Ethiopian Central Statistics Agency
EDHS	Ethiopian Demographic and Health Survey
ETUS	Ethiopian Time Use Survey
FPE	Female Political Ecology
IDWSSD	International Water Supply and Sanitation Decade
MfM	Menschen für Menschen
MICS	Multiple Indicator Cluster Survey
NGO	Non-governmental Organization
SDG	Sustainable Development Goals
UNICEF	United Nations Children's Fund
WASH	Water, Sanitation, Hygiene
WPI	Water Poverty Index

1.   Introduction

The improved access to safe and affordable drinking water in developing countries is one major aspect in the global fight against poverty. Therefore the United Nations Sustainable Development Goal Number 6 (SDG) aims to *„achieve universal and equitable access to safe and affordable drinking water for all"* by 2030. For this purpose non-governmental organizations (NGO) all over the world are working closely with governments, multilateral organizations and donors. Water development projects can range from simple hand-dug wells in one village to complex water supply systems for an entire district. No matter of the size these water projects, all aim to ensure a sustainable and long-term operation. For this purpose development actors have relied for decades on participatory approaches which involve the local community in the planning, construction and management of water supply systems. Behind this approach is the assumption that their involvement will create a sense of ownership and responsibility and hence ensure sustainability. In addition, water projects in sub-Saharan Africa are often promoted with the intention to improve livelihoods for women and girls in particular, because they are the main water collectors for household purposes. The collection of water from far off unprotected sources is an often physically distressing and immensely time consuming activity. Thus, in the communication materials of development actors, participatory approaches in the water sector are advertised with buzzwords such as „sustainability" and „empowerment". These heroic claims stand in stark contrast to the reality because water projects in sub-Saharan Africa suffer from high failure rates and in spite of using participatory approaches don't reach the intended sustainability and equity objectives. In addition to that feminist scholars criticize the simplistic approach that women's empowerment is the outcome of the access to piped water. In this thesis, I investigate the effects of a drinking water project in Ethiopia and take a closer look beyond these promising buzzwords to assess how sustainable and empowering these water projects are in reality.

The aim of this research is to analyze how NGOs seek to achieve the sustainability of a rural town water supply system - what assumptions do they make, how do they select beneficiaries, how do they implement participatory approaches, how does the project seek to include women- and what the effect of these intentions are on female empowerment. In order to get a practical example, field research in the small town of Lemi in Amhara Regional State in Ethiopia was conducted. The German-Austrian NGO „Menschen für Menschen" (MfM) constructed a rural town water supply project financed by the German government. I worked for this NGO from 2016 - 2020 as Public Relations Coordinator and the research in this thesis is thus partially based on an insider-position as a former employee of the organization. MfM advertises its success in engaging the active involvement of the community in the construction and management of the town water supply, which was finished and inaugurated in 2018.

This research is divided in two thematic chapters: The first thematic chapter assesses how MfM seeks to ensure the sustainable operation of the Lemi town water supply. For this purpose, project proposals and other documents will be reviewed and compared with qualitative research results obtained through interviews from involved actors such as the WASH committee and project staff members.

Due to the fact that water collection in Ethiopia is a heavily gendered activity, the second thematic chapter of this research deals with the question of how the water supply in Lemi affects female empowerment. In order to assess whether these women perceive an empowering effect, interviews with women from different ages and social backgrounds were conducted.

The last chapter of the research discusses the outcomes and relates them to a wider political framework while also presenting alternative approaches for the implementation of sustainable water projects in Africa.

For answering the first research objective, a critical policy analysis of participatory approaches and community management in the water sector is used. The benefits and limitations of these approaches will be assessed to ensure sustainability for rural water projects.

In the second thematic chapter, basic theories for poverty such as Sen's capability approach and the concepts of empowerment are used to build the theoretical framework for this part of the research. Additionally, the concept of time poverty will be closely examined because it has a major impact on the capability-depriving aspect of water insecurity.

2.   Theoretical embedding

In this research a critical analysis is used to explore how different factors influence the operation of a rural town water supply system and its impact on women's empowerment in Lemi. This chapter sets out an examination of the theoretical and conceptual embedding of the research by exploring the literature and evidence from former studies on water security, poverty, water governance, gender and the linkages between these concepts. The chapter will conclude with a section on research objectives and questions.

2.1   Water governance in development

In the last decades the improvement of access to water has become a major task in order to reduce poverty in the Global South. This is manifested in SDG 6, which aims to ensure availability and sustainable management of water and sanitation for all. However, development projects in the water sector are particularly challenging because of their complexity and high failure rate. This chapter will therefore explain the common operational procedures of development actors for water supply projects. For this purpose it will analyze the institutions and approaches that should, in theory, enable a community to manage a new water system.

2.1.1   Participatory approaches in water projects

The idea to involve the benefiting community in the planning, operation and management of water supply systems did not came out of nowhere. It is rather a product of decades of trial and error in the water supply sector. In the 1960's and 1970's it was generally assumed that governments in developing countries are, like their northern counterparts, capable of smoothly managing and maintain essential infrastructure. In the spirit of modernization theory, international donors would provide complex technical solutions with the assumption that the respective government would provide the necessary maintenance and management capacity. This „supply-driven" approach appeared to be a rather unsuccessful model, mostly because of unsustainable technologies and government incapacity in operation and maintenance. (Nicol, 2000) The shift towards a „demand-driven" approach came in the 1980's with the International Drinking Water Supply and Sanitation Decade (IDWSSD), which promoted the later failed „water for all" target. However, the active involvement of communities in the operation, maintenance and cost-sharing of water supply systems seemed to be a more effective solution because that would create a sense of ownership

among those communities. In addition, community management suited the agendas of the different development actors of that time. (Schouten & Moriarty, 2004) Governments in developing countries saw community management as a way to cover up their inability to build and maintain water supply infrastructure. (Carter et al, 1999) For donors the approach enabled them to expand their budgets and to bypass the problems of inefficient and corrupt governments. NGOs applied the approach to become the voice of the beneficiaries and were eager to increase their influence as the main service providers in developing countries. This particular role will be further analyzed in Chapter 2.2.3. Furthermore, the reduced government involvement through community management made the concept attractive for multilateral lending institutions such as the World Bank. (Schouten & Moriarty, 2004)

The concept of community management became, therefore, an apparently smart solution in the development sector for this problem. From the beginning of a project, bilateral organizations and NGOs included the beneficiaries in the process of construction and later shifted the responsibility of operation and management towards them with the idea that this would create a sense of ownership and responsibility. The underlying principles of this approach are that the community plays a major role in its own development, has ownership of the water system and takes responsibility for its operation and maintenance. It is important to highlight at this point the characteristics of community participation in development interventions: (Harvey & Reed, 2006) *„Community participation is a consultative empowerment process designed to establish communities as effective decision-making entities. This broadly means that the community to benefit from an improved water supply is involved in information sharing, consultation, decision-making, and initiating action."* (Harvey & Reed, 2006: 367 - 368)

2.1.2   Community and institutions

It is important for a deeper understanding of participatory approaches to have a closer look at the term „community", because it is widely used by development actors to justify their bottom-up interventions. In development projects, communities are *„conceptualized as some kind of natural, desirable social entity imbued with all sorts of desirable values and the simple manifestation of this in organizational form."* (Cleaver, 1999: 603) In these project boundaries the idealized community is a well defined entity with clear administrative arrangements and presumed endless inner solidarity that is capable of doing anything. It is assumed that they only need a mobilization push from an outside force and unlimited development capacities will be unleashed. According to Cleaver, development practitioners determine clear administrative boundaries from an outsider perspective that support the intended delivery of goods. (Cleaver, 1999) However, this assumption has its limitations and research has shown that communities are overlapping and have complex socio-cultural relationships. Especially the case of resource management such as water or grazing lands shows that whole village

communities are more heterogenous and factional than neighborhoods or households. (Li, 1996) It is criticized that this social and cultural diversity are usually not paid enough attention in the planning and implementation of development projects. (Cleaver, 1999; Li, 1996)

For development actors such as NGOs, defined communities are an essential blueprint for the institutionalization of their interventions. In the case of water projects these institutions are so called water or WASH (water, sanitation, hygiene) committees. It is assumed in development interventions that a community is willingly and effectively adopting a new formal institution that manages common resources like water. Furthermore it is expected that these „new" institutions facilitate complex issues and also communicate with other superior institutions, i.e. district level. *„The fit of such prescriptions with New Institutional Economics (NIE)-based theories about the type of „robust" institution suited to resolving common property resource management dilemmas is startling. A focus on formal public structures with clear boundaries, transparency, representativeness and the codification of rules through written bye-laws, contracts and specification of property rights is common to the literature on „design principles" for institutional development."* (Cleaver, 2001: 27-28) As mentioned earlier, resources like water are therefore perceived by external forces as „open access" with no existing „traditional" arrangements that regulate their use. In order to craft an institution that fits the needs of a target group and its setting, Frances Cleaver proposes the concept of institutional bricolage. The basic assumption behind this concept is that institutions are constructed *„through a process of bricolage - gathering and applying analogies and styles of thought that are already party of existing institutions"* (Cleaver, 2001: 29) In other words, institutions for resource management are not derived from universal design principles but rather are crafted by a blend of the modern, traditional, formal and informal norms of the society they serve. (Cleaver, 2001) In the practical development context an example for institutional bricolage is for example the involvement of traditional or religious leaders in the planning process in order to persuade a community to participate in a project. The concept of institutional bricolage will return later in this research.

2.1.3   Limitations of the participatory approach and community management

The involvement of communities in operation and maintenance seems to be, in theory, a suitable measure to ensure the sustainability of water supply systems. But the high failure rates, one to three years after commissioning shows that this concept also has its limitations. There is growing evidence that numerous problems can lead to a breakdown of rural water supply systems. One can categorize these problems into two major groups:

The first are problems within the affected community. The following are some possible examples: Because the community management relies on the voluntary action of individuals that are organized as i.e. a WASH committee, there is a risk that they develop reluctance and disinterest for that

commitment. Additionally, mismanagement of the committee can cause mistrust among the general community and they can refuse to support it. It is also common that the community is lacking the technical and financial skills which can affect, for example, their capacity to perform repair works or to collect fees properly.

The second group are related to the factors affecting the operation of the water system. These can range from insufficient design to poor implementation. Most important, though, is a lack of longterm support by the implementing agency or government institutions to help communities with repair and maintenance. This particular problem can lead to demotivation among the community, and water supply systems end up abandoned. (Schouten & Moriarty, 2004; Niedrum, 1994; Cotton & Taylor, 1994; Doe & Khan, 2004)

Another shortcoming of participatory approaches is the prevailing assumption that community ownership of a water supply automatically creates a sense of responsibility in its management. Research has also shown that a willingness to pay for the operation and maintenance does not necessarily entail a strong sense of ownership. (Harvey & Reed, 2006)

2.1.4 The role of NGOs

As actively involved agencies, NGOs play a crucial role in the implementation of rural water supply projects in the Global South. Since the end of the Cold War the NGO landscape has been transformed: they are bigger, more sophisticated and receive more donations than ever before. With the increased funding, critical voices became louder asking about the ability of NGOs to meet longterm transformative goals. (Banks et al, 2015) Julie Hearn has used the term „comprador" to understand the contemporary role of NGOs in Africa. The term has its origin in Latin American Marxist theory and describes *„an agent, operating in the interests of international capitalism against the interests of the indigenous popular class."* (Hearn, 2007: 1098) This quote summarizes well the context in which most NGOs are operating: Under serious time and performance pressure from Northern donors and cooperation partners, they must implement development projects in complex foreign societies. These projects must be, at least in the short-run, successful because otherwise the donor will not provide funding again. It is contradictory that NGOs implement „bottom-up" and participatory approaches where the beneficiaries or „the poor" should take responsibility for their own development, but are at the same time a product of Northern top-down agendas. Donor institutions design tools for development management with clear indicators for measuring achievements and evidence for change which puts NGOs under enormous administrative pressure. Because the demand from donors is increasing, NGO field staff are often more busy with writing detailed progress reports than actually working in the field with the beneficiaries. (Wallace, 2004)

Tina Wallace summarizes this dilemma as follows: *„While there is constant talk of downward accountability in the aid chain, the reality for most NGOs is that accountability is upward."* (Wallace, 2004: 214)

It is furthermore said by some that NGOs are following the tradition of a „scramble for Africa" in which European powers competed with each other to colonize the continent. Fowler summarizes thus: *„…the irony is, that one hundred years on there are signs that Africa is again the subject of 'scrambles'… First is the scramble of non-government development organizations (NGDOs) to be involved in the continent's development, second is the scramble of official aid agencies to find, finance and work with and through NGDOs."* (Fowler, 1991:1) In order to respond to the claims of neocolonialism made against the heavy white presence of NGOs in Africa, the organizations have changed their operational narratives: Since the late 1980's, the amount of local NGOs that received funding from Northern donors increased dramatically. Hearn calls this the *„Africanization of the NGO sector"* (Hearn, 2007) and local organizations benefitted directly from international funding. It created its own social class of bureaucrats and its own economic branch in many countries of the South.

Many NGOs are entirely dependent on external financial resources and patronage that secure the jobs for their staff in field and in the head office. As a trade-off they are obliged to implement Northern development policy in countries in the Global South. Buzzwords such as *participation*, *bottom-up* and *empowerment* hence give the impression of closeness between donors and beneficiaries, while simultaneously underline their professionalism. (Hearn, 2007)

2.1.5   The „Projectization" of water interventions

In the current development sector, stakeholders distinguish their interventions in development countries as projects and programs. Especially projects have for decades been criticized for their perceived weakness in addressing the fight against poverty. Therefore it is necessary to explore the strengths and weaknesses of the project approach in order to understand the socio-political dynamics of interventions in water sector. According to a 2012 McKinsey-Devex survey, 64% of donor-funded projects fail in achieving their intended impact due to poor project planning and management. (Hekala, 2012) Honadle and Rosengard distinguish projects and program as follows: *„Projects' are discrete activities, aimed at specific objectives with earmarked budgets and limited time frames. This is in contrast with 'programmes', which have more nebulous objectives and occupy a more permanent status in an institutional setting. Projects are also more likely to be targeted on specific geographic areas and aimed at particular beneficiary groups."* (Honadle & Rosengard, 1983: 300)

Because of their limited time frame, projects are often only temporary infusions of resources that tend to not benefit anymore as soon as a project is declared finished. This has hence a negative impact on their sustainability. The failure of projects is also due to an overemphasis on visible quick results from donor organizations under high political pressure. Ika identified four „traps" in which

development projects can get caught and that increase the chances of failure. The first is the „One-Size-Fits-All-Trap" which originated in the traditions of fields such as engineering and economics with the assumptions that all types of projects share the same characteristics. (Picciotto & Weaving, 1994) Donors such as the World Bank or the German Federal Ministry for Economic Cooperation and Development (BMZ) have standardized procedures for all their projects. This approach involves the risk that the project planning is the fundamental activity and that the focus of the management is more concerned with adjusting a project to the donors framework. (Ika & Hodgson, 2010) The second trap is what Ika calls the „Accountability-for-Results Trap", where implementing agencies are stuck in a maze of procedures, guidelines and projects fund reports, or compliance with donor and procurement guidelines. With projects caught in this „trap", reporting is mostly used to satisfy external requirements and not to used to improve management decision-making processes. (Ika, 2012) The third is the „Lack-of-Project-Management-Capacity Trap": Least developed countries with weak governments and poor administrative structures are at a higher risk for failing development projects. Besides political instability or violence, these failures are often caused due to a shortage of qualified personnel for project execution as well shortages of management-trained civil servants. An intervention in these countries involves a higher cost for aid agencies and under the pressure of efficiency they reduce their budgets for administration and supervision. (Ika, 2012)

2.1.6 „Scaling up" as an alternative to the project approach

This uncertainty raises the question of whether a short project approach is sufficient to guarantee a sustainable future operation. Research findings of recent years have indicated that so-called „upscaling" of resource management can be a more effective and more sustainable solution than small scale community management. (Schouten & Moriarty 2004) Scaling up a rural water system means a transition that goes beyond the project approach on community level to a water supply service that incorporates an entire district or region. This includes not only an increased target population but also scaling up of functions and strategies for service delivery. It further means that the capacities at the intermediate level such as district water bureaus, local NGOs, professional associations, private sector companies or banks need to be developed. The idea behind this approach is that single communities are not able to manage a water system entirely by themselves and that the involvement of more stakeholders in the planning, construction, operation and maintenance leads to knowledge sharing. To give a practical example how scaling up in the water sector can be facilitated in Ethiopia it is worth looking at the UNICEF Programme „ONEWASH Plus". This programme was intended to improve water and sanitation provision as well as hygiene behaviors in eight towns in Ethiopia. For this purpose ONEWASH Plus included capacity-building

for utility-based sustainable service provision. *„The overall programme rationale for ONEWASH Plus is based on a conscious strategic shift in UNICEF programming towards an urban focus, as a result of WASH needs being increasingly concentrated on small towns. UNICEF's Ethiopia country office realised that this strategic shift must coincide with a shift in programme principles to focus on value for money, private sector participation, achieving services across the full sanitation chain, developing user and service provider accountability, financial sustainability, and improving resilience."* (UNICEF, 2019: 3) With this holistic approach the private sector actively engages in the capacity building of town and municipality technicians and officials. Furthermore, private operators have been trained to facilitate self-sufficient waste management such as public toilets, showers and water kiosks. In order to create an understanding for the business-orientated approach, ONEWASH Plus considers the populations of small towns as „users" rather than „beneficiaries". Of course, ONEWASH Plus was not a programme without challenges. For example, UNICEF cannot estimate how accountable municipalities will be once after UNICEF is no longer the driving force behind the programme. In addition, a mismatch in implementation occurred   in which communities were sensitized for specific behavior change but the required technical infrastructure was not operating. (UNICEF, 2019)

2.2.   Water insecurity as a dimension of poverty

According to Amartya Sen, poverty is a condition that arises out of a capability deprivation. (Sen, 1999) In other words, the lack of basic conditions or commodities hinder an effective life and therefore leads to poverty. Water is for humans a basic condition for a good life and the lack of water can have additional repercussions for well-being. For example, low quantities of water have a direct impact on human health because personal and food hygiene cannot be carried out properly. Also, inadequate access to water has a direct relationship with the productivity that impacts economic activities. Especially for women, who are in sub-Saharan-Africa the main water collectors, inadequate access causes time-poverty (which will be assessed further in a separate chapter). It is necessary to undertake a holistic assessment of the dimensions of water insecurity in order to get a full picture of this kind of poverty. The Water Poverty Index (WPI) by Sullivan et al is a tool to measure water stress at the household level and was designed for NGOs and governments to determine priorities for interventions in the water sector. (Sullivan et al, 2003). The WPI uses the following indicators for water stress:

1. *Measures of access:* It is not sufficient to assume that improved water sources such as taps, hand-dug wells, which are located within a short travel distance, will automatically guarantee water security. If not enough taps are available and too many users need water, fetching water can be very time consuming as well. The same problem occurs if the pressure from the tap is too low and it

takes much time to fill, for example, a jerry can. Another constraint is the ability to pay for improved water access. Some poor households are unable to afford a certain financial contribution and are still forced to consume water from unprotected sources.

2. *Water quality and variability:* Improved water quality goes beyond digging a hole. It is necessary to control the water quality on a regular basis to ensure that no harmful bacteria or chemicals are in the water. For health effects the distance from source to household again plays a role: health impacts of water are related to both the quality of water and its availability within a reasonable distance; studies indicate that clean water within a distance of no more than one kilometer from the house tends to lead to improved health status, since people start to use substantially more water for cleaning and washing. (Sullivan et al, 2003: 190) Uncertainty in water supply can be caused by seasonal rainfalls that influence river flows and groundwater levels. Also poorly constructed and maintained water sources have an impact on water availability and quality.

3. *Water for food and other productive purposes:* Water is not only used for drinking and personal hygiene. On a household level it is also used for food production like livestock watering or small scale irrigation. Especially in dry seasons, where water might be scarce, this can cause conflicts of interest between users in the household and community.

4. *Capacity to manage water:* Communities as well as local administrations need to be able to manage water sources. Communities can lobby for improvements, take responsibility for maintenance and strengthen the effectiveness through water users associations.

5. *Environmental aspects:* It is essential to maintenance the environmental integrity and water supply systems should not cause environmental damage.

6. *Questions of spatial scale:* Access to water is highly dependent on the spatial situation. Some households can be geographically more distanced from a water source and need more time to fetch water, which in turn has a direct impact on their livelihood.

These examples highlight the multidimensional aspects of water security and emphasize the effect it has on health, economy, general welfare and social relations. This is important for this research because in the NGO sector it is assumed that the access to water enables especially women to increase their capabilities and hence their economic activity.

2.2.1   Gender

To further elaborate the theoretical framework of this research, feminist political ecology (FPE) will be now discussed, because it is one. FPE has its roots in political ecology, a research field where the relationship between nature and society, as well as the access and control over resources and hence its implications on livelihoods of people, is analyzed. Since the 1990's it became clear that gender plays a significant role as a variable in this field because of the stark differences in how women and men control or access natural resources and how this shapes their livelihoods. (Elmhirst, 2011) Since then gender has become a very important variable for a lot of inter-disciplinary research. Particularly in the field of water in developing countries, gender makes a significant difference to how this resource influences livelihoods. In recent years a lot of research in different countries has been conducted with surprisingly various outcomes for how improved access to water impacts gender relations. For example, a study by Arku in Ghana came to the conclusion that women had, after the construction of a town water supply, more time for economic activities such as petty trading and therefore challenged the assumption that men are necessarily the main breadwinners. (Arku, 2010) Another study conducted in rural Kenya by Crow et al came to a similar conclusion: improved access to water had a positive impact on household income because women had more time for home gardening and livestock production. In addition, women's wellbeing improved too, because they had more time for rest and leisure. (Crow et al, 2011) A field study in Mozambique by van Houweling, however, came to a contrary conclusion from analyzing the impact of a similar water project. In her case study, the economic assumption that improved water access automatically kickstarts women's empowerment and individual economic activity cannot be proven. After implementation of the water supply system, the majority of the women used the time benefits for continuing with activities that were already part of their traditional role as wives. *„The choices women made may also be related to the relatively egalitarian domestic relationships among the Makhuwa, women's strong engagement in farming, and their general satisfaction with their cultural roles. Men's satisfaction might be based on the fact that the water project did not challenge the status quo."* (van Houweling, 2016: 1076) This example shows clearly that the assumed empowerment is highly contingent on the cultural circumstances in which water projects are implemented. Furthermore, these findings stand in clear contrast to Sen's capability approach and a normative way of conceptualizing women's capabilities.

2.2.2   The question of empowerment

Similar problems with community are faced with the term of „empowerment", which became another catch phrase in the development sector. Radical empowerment has its roots in the Freirean philosophy and is influenced by the liberation movements found in developing countries in the

1950s and 1960s. In this context, communities empower themselves when they start a dialogue, listen to each other and develop own strategies for change. They are not just recipients of political and educational projects but rather define problems and solutions within their own society. It further proposes that community empowerment strategies must be linked to a larger society in order to achieve acceptance. (Wallerstein & Bernstein, 1994) Therefore, empowerment stands for structural change which opposes authorities and the government. In the development context it often remains unclear who should be empowered. Societies are categorized in groups such as „women" or „the poor" and it remains also unclear how these sub-groups might exercise their agency. The concept of empowerment becomes an apolitical toothless tiger where the individual is expected to use the opportunities that are offered by NGOs to improve their lives and that of the community. But narrowly designed projects often do not allow the exploration of non-project related livelihood complexities which are also important for a deeper understanding of the society in which development projects are implemented. (Cleaver, 1999)

As mentioned before, women are the main water collectors in sub-Saharan Africa and any development intervention in the water sector has important effects on their daily life. Consequently „female empowerment" is another buzzword in water projects that needs clarification. In current development interventions women's empowerment is often measured in an improved economic activity that contributes to national economic growth but fails to initiate social and political change. (Leder et al, 2017) Naila Kabeer's conceptualization of female empowerment offers a broader view on the impact of material resources in the lives of women: For Kabeer women's empowerment can be conceptualized thorough agency that enables women to make choices. *„One way of thinking about power is in terms of the ability to make choices: to be disempowered, therefore, implies to be denied choice. My understanding of the notion of empowerment is that it is inescapably bound up with the condition of disempowerment and refers to the processes by which those who have been denied the ability to make choices acquire such an ability."* (Kabeer, 1999: 436) Hence, empowerment is the process of change by expanding the ability to make strategic decisions that have desired outcomes as a consequence. This ability is closely linked to Sen's capability approach and has three dimensions: agency, resources and achievements. To have choices depends on the access and control over material but also over social and human resources. But these choices are not only limited to, for example, the well-being of children, but rather to having alternatives available. This ability to choose is the central point of power and therefore the precondition for empowerment. (Kabeer, 1999)

2.3.   The capability approach and women's empowerment in development

In order to analyze the relation between water and society, Amartya Sen's capability approach is employed as part of   the theoretical framework for this research thesis. In this chapter, this approach will be elaborated with an explanation for how it is useful for the research objective.

The capability approach is a widely used framework for the assessment of wellbeing and what empowerment ideally should be about in development. The capability approach defines a person's well-being through beings and doings (functionings) and in terms of the person's capability to choose among such functionings. To be more clear, functionings are defined by what a person does or is. For example, to be nourished, take part actively in a community event, or engage with friends. By contrast, capabilities are defined as the ability to do and be, or to have the freedoms and opportunity to realize those functionings. (Alkire, 2005; Sen, 1999; 2001) *A key analytical distinction in the capability approach is that between the means and the ends of well-being and development. Only the ends have intrinsic importance, whereas means are instrumental to reach the goal of increased well-being, justice and development. However, in concrete situations these distinctions often blur, since some ends are simultaneously also means to other ends (e.g. the capability of being in good health is an end in itself, but also a means to the capability to work).* (Robeyns, 2005: 95)

Even though this approach is used to assess welfare state design, it is not a tool to explain poverty. Because of its radically underspecified nature, it more serves as a framework to conceptualize and evaluate this phenomena. How a researcher applies this approach depends on the theory, the kind of application or measurement as well as on the epistemological assumption. (Robeyns, 2006) Amartya Sen always tried not specify which capabilities are essential for human well-being because a normative list precludes the opportunity for communities to actively choose the capabilities necessary for their functioning. However, Martha Nussbaum developed the capability approach a step further and identified a list of ten „central human capabilities": Life; Bodily health; Bodily integrity; Senses, imagination and thought; Emotions; Practical reason; Affiliation; Other species; Play; and Control over one's environment (Nussbaum, 2003). To promote the link between hydro-social relations and human wellbeing, this thesis's normative framework is drawn from Nussbaum's list of capabilities and particularly the capability of bodily health. The same was done by Jepson et al. who stressed the importance of the capability approach for water-social relations thus: „*As such, the policy emphasis will be shifted away from the delivery of drinking water as an end in itself. Instead, emphasis must be on the promotion of social relations that are conducive to securing safe and affordable water for individuals and communities so they can live their lives as they choose, achieve freedoms in line with their own vision, and achieve their fullest potential. In short, the focus would shift towards sustainable and just hydro-social processes in support of human capabilities.*" (Jepson et al, 2017: 48) Jepson et al propose to use the human capability approach to think beyond the pure materialistic paradigm of water security and argue instead that the relationship with human wellbeing empowerment should be paid more attention. (Jepson et al,

2017) This approach is focused on the social relationships that enable the individual capabilities required for survival and development. (Sen, 1999) In his book, Sen also argues that freedoms are both the ends and the means of intentional social change. Freedoms are the enabling power for social change and he categorizes five instrumental freedoms that are crucial for achieving that change. To highlight the implication for water, Matthew Goff and Ben Crow took those five instrumental freedoms and illustrated their application to water, as shown in the following table.

Instrumental freedom	General example	Illustration for water
Political freedoms help to promote economic security	Free speech and elections	Representation of the poor and marginalized, along with democratic pressure, may be required for water delivery infrastructure to be built in low-income areas
Economic facilities help to generate personal abundance and public resources	Opportunities for participation in trade and production	Access to water is a prerequisite for many informal-sector businesses
Social opportunities facilitate economic participation	Education and health facilities	Substantial and uncertain water collection times constrain the social opportunities of women and children, including their ability to get education and health care
Transparency guarantees	To prevent corruption, illicit deals and financial irresponsibility	Open books and open responsibilities in water utilities can help reduce corruption and favouritism in water supply for the rich and powerful (in irrigation as in domestic water)
Protective security	To provide a social safety net against famine and other causes of extreme distress	Provision of adequate access to safe and sufficient water is key for livelihoods which may provide security in times of deprivation

Table 1: Sen's instrumental freedoms and their application to water. (Goff and Crow: 2014, 166)

2.3.1   Time Poverty

As a way to measure 'women's capabilities' in a rural town in Ethiopia, I focus on time-poverty. Blackden and Wodon define time-poverty as one important dimension of poverty and they approach the problem that time-poverty in Africa wasn't measured before and emphasize the difference between men and women's contribution to the household. Blackden and Wodon define time-poverty as another dimension of poverty and they highlight how the problem of time-poverty in Africa was rarely measured before; they also the difference between men's and women's contribution to the household. Blackden and Wodon argue that women's daily activities such as looking after children, preparing food and fetching water and firewood are not considered as work in economic terms. In another paper by Bardasi and Wodon, time-poverty is given a comprehensive

definition: „*However, unlike consumption or income, about which economists assume that "more is better," time is a limited resource: more time spent working in paid or unpaid productive activities means less leisure, and therefore higher "time poverty."* (Bardasi & Wodon, 2010: 50) In their research they analyze rural and urban households in Guinea. This paper also concludes that woman in rural areas are suffering from time-poverty, which means that they spend a lot of time on water collection and cannot spend this time on other activities. The reason is that, beside their basic needs, women are responsible for domestic burdens like fetching water and firewood. Another piece of research from Mozambique by Diksha Arora comes to the same conclusion. Here again it is highlighted that the gender division of labor puts women in a more disadvantaged position than men in the private sphere. The study also reveals that the work and leisure of women are overlapping, as seen in the example of childcare being done during leisure time. Multitasking and intense workloads lead to time-poverty for women. (Arora, 2015) It is important to note here that the term work is difficult to specify. Therefore, one has to ask the question whether work consists of only income generating activities, or if reproductive activities such as cooking or taking care of the children can also be considered as work.

These three mentioned studies used time-use studies to strengthen their research findings. Time-use studies are not only used by researchers, but also are by policy makers and governments to asses the time use of a certain group or population. A study by Ann Whitehead with the title "Lazy men: time-use, and rural development in Zambia" argues that time-use studies contain ‚value judgements about what constitutes work, and about how researchers and planners categorize this.‘ (Whitehead, 2010: 49) Time-use studies categorize various activities into work and non-work. However, these kind of strict categorization does not often produce a realistic picture, because the concept of work versus leisure time is connected to certain values and ideas that are mostly influenced by a western narrative. This is especially so in the context of women, where multitasking activities such as caring for children while talking with a friend tend to blur the boundary between work and leisure. Therefore Whitehead argues that researchers who use time-use surveys need to be careful with this data for interpretation, because if they taken out of the local and cultural context in which the work is done, they produce an inadequate picture. (Whitehead, 2010)

Because this thesis focuses on the time-consuming activity of water collection , a study from 2016 in of water collection by women and children in 24 sub-Saharan African countries was taken into consideration. The data for this extensive study came from two major international survey programs, the Multiple Indicator Cluster Survey (MICS) and the Demographic Health Survey (DHS). With an emphasis on gender difference and time in water collection this study found that in all 24 countries adult females were primary responsible for water collection and that female children are more likely to collect water than male children. Men are mostly not involved in water collection. Furthermore, six countries had more than 100,000 households where children are the main collectors of water. Among these countries is Ethiopia, with 1,321,424 households. Also in Ethiopia, in 4,7 million households female adults were the main water collectors and spent more

than 30 minutes on this activity. (Graham et al, 2016) The lack of drinking water is one of many challenges for people in rural Ethiopia. In 2007 the Ethiopian Ministry of Finance and Economic Development (MoFED) estimated that only 46.4 percent of the rural population have access to clean drinking water. As mentioned, in rural Ethiopia mostly girls and women are responsible for fetching water and need to walk more than half an hour to the nearest water source. In a 2011 working paper by the Ethiopian Strategy Support Program the authors underline this problem and its consequences: „*This long travel distance to the nearest water source directly affects women and children, who are mainly responsible for fetching water. This has an implication on the productivity of women. The long hours spent in fetching water take a significant amount of time that could be employed in other income-generating activities. The human capital implication for young girls cannot be overlooked as well. Most girls in Ethiopia find it too difficult to attend and succeed in school because a significant amount of their time is used for domestic chores, including fetching water.*" (Abebaw et al, 2011: 2) The previous quote highlights the capitalist understanding and classification of work versus non-work and it provides insights how women's productivity is perceived in the development context: Fetching daily water for food provision, hygiene and other activities is not considered as the same work men doing. Finally, the paper comes to the conclusion that improved water sources only increase user satisfaction by 25 percent. Therefore this thesis will analyze how the role of NGOs in communicating the implementation of a water supply with the community, and the kind of expectations they create towards women's role in the process and afterwards. The authors of this Ethiopian case study see the reasons in lack of awareness of the health benefits of clean water, long travel distances to those facilities and the monetary cost for construction and water use. (Abebaw et al, 2011)

2.4   Problem Statement

Through the analysis of the theories and concepts of the previous chapter, the following problem concerning the implementation of water projects and their impact on women's empowerment was identified. The main problem which was identified for this research is that the upward accountability towards donors is endangering the sustainability of water projects in the Global South. This problem has further implications on how projects are implemented and despite the use of participatory approaches, water projects in developing countries have high failure rates. In addition to that development agencies assume that the access to piped water automatically increases women's empowerment. In order to analyze this problem, this research is divided in two thematic chapters, each dealing with one of the aspects of this problem. The first thematic chapter revealed that various reasons can lead to a technical failure of water supply projects in Africa. In the eyes of development actors, participatory approaches seemed to be the panacea for the sustainable operation and maintenance of those systems. Like many other NGOs in Africa, MfM also uses this

approach to ensure sustainability for their donors. But because of the recent breakdown of the Lemi town water supply it is necessary to review how NGO's, governments and communities are dealing with the responsibility to ensure sustainability of the water project.

The second thematic chapter relates to the first one and examines the problematic narrative of female empowerment that is widely used by development actors. In the communication between NGOs and their donors as well as in their project proposals, female empowerment is mostly defined in economic terms. In their view, improved access to water enables women to have more time for the income generating activities which empower them relative to their male counterparts. This particular definition of empowerment follows explicit neoliberal thinking of economic growth but excludes a more critical approach of having the choice for critical consciousness.

2.4.1 Research Objectives

The overarching objective of this research is to examine how NGOs seek to achieve sustainability in water supply projects in rural Ethiopia and how this infrastructure affects female empowerment. The first thematic chapter will critically review the modus operandi of MfM's implementation of the Lemi town water supply with emphasis on the question of sustainability. This is of particular interest because sustainability in terms of longterm operation and maintenance is a major obstacle for development actors in the water sector. Therefore it is necessary to have closer look at the circumstances and paradigms under which these rural water supply projects are conceptualized and implemented. There is already a sufficient amount of research that deals with the question of why water projects have a tendency to be technically unsuccessful but the question of failure is usually approached from the perspective of technical or economic analysis and not in the larger socio-political context in which such projects are implemented. For this reason the context of rural Ethiopia and MfM as the implementing NGO was chosen, not only because this country is currently in a state of rapid transition but also because the author's former employment in this organization gives extensive insider knowledge into how the NGO operates. A critical analysis of this project and its outcomes may therefore be useful for future strategies.

The second thematic chapter is based on the first one and tries to give an answer to the question of how female empowerment is achieved through improved water access. The improvement of female livelihoods is often a declared goal to justify water interventions in the Global South. It is assumed that water sources close to the home will give women gain extra time which they can use for income generating activities. However, research from various African countries has shown that women's time benefits are not necessarily connected with increased economic activity and that this again is highly dependent on the socio-cultural setting in which the infrastructure is built. In the case of Lemi this is particularly interesting because this area is mostly populated with Muslims. Therefore, it

is useful to get a deeper understanding how female empowerment is perceived in this very conservative patriarchal society. As a consequence the research objective for the second thematic chapter is to look beyond the promoted narratives of economic empowerment and to find out how improved access to water leads to a critical consciousness that questions the present status quo.

2.4.2 Research Questions

Following on from the theoretical embedding, the problem statement and the research objectives, the following research questions have been formulated. The analytical part of this thesis is separated in two thematic chapters which will answer these research questions. This question and its sub-question will be answered in the conclusion of this thesis.

How do NGOs sustainable and successfully seek to implement drinking water projects in Ethiopia, and what are the effects on women's capabilities?

The sub-questions are the following:

1. What role does MfM play in the dynamics between donor and recipient community?

2. How does the water supply effects women's empowerment in Lemi?

3. What do women in Lemi consider as empowerment through improved access to drinking water?

3. Research design and methodology

3.1 Operationalization of concepts

The concepts which have been operationalized in this research are based on most commonly used definitions and on existing literature. The concept is water insecurity and its consequential effect of time poverty because it is relevant to understand capability deprivation. In this research time poverty refers to the incapacity of women to have enough time during the day to take care of themselves for i.e. food preparation, personal hygiene and others such as children. Furthermore, the lack of time has also a negative impact on their capability to have choices that go beyond their

improvement of the immediate economic situation. The second concept relates to water governance and how development actors seek to achieve sustainable operation and maintenance of water supply systems. For this purpose it was necessary to deeply analyze project proposal documents as well to conduct interviews with development experts.

3.2 Research design and methodologies

For this study a mixed method approach of critical policy analysis and qualitative research was chosen to answer the research questions. This decision was made because the initial research objective slightly changed after arriving in the field. In order to find out how MfM is implementing their water projects in Ethiopia it was necessary to obtain and critically assess policy documents such as project proposals and donor reports. Because the author's former employment with this particular organization in Ethiopia, it was possible to use extensive insider knowledge to evaluate and frame the information. However, qualitative research methods such as interviews and focus groups discussions with women in Lemi, members of the WASH committee and NGO staff were used during the field research in Ethiopia. The following chapter will provide a deeper explanation for why these methods were chosen and how effective they were for the research objective.

3.3 Insider-position

For almost four years I was employed with MfM and worked as the organization's Public Relations Coordinator in Ethiopia. This position allowed me to gain first hand insights inn how the NGO is planning and implementing its projects in the water sector. My job in communications was actually to „sell" these projects to a larger audience. The knowledge about MfM and Ethiopia gained during that time was particular useful for the preparation and final realization of this research. While studying in the Netherlands, I was able to contact the responsible persons of the NGO in their Munich office and Addis Ababa to communicate the purpose of the research about a rural town water supply project. It was also advantageous to know who to contact within the organizations in order to access project information and project proposal documents prior to the actual field research. In this position as a former employee, staff members of MfM were trusting and provided these documents. Familiarity with Lemi town, due to extensive previous travel to the area for work related duties, was an added advantage.

During the my time in Ethiopia I conducted numerous field trips to the project areas, enabling a deep understanding how MfM operates. Besides in-depth knowledge about MfM's projects, I also further developed intercultural competence as well as basic language skills in Amharic. However,

this close relationship with MfM had also brought limitations to this research; I basically studied the „community" and „woman" through the same lens of analysis as my former colleagues.

3.4 The first phase: Preparation from the distance

In the initial phase of this research it was necessary to obtain all important project documents by MfM. By that time the research should take place in Oromia Regional State in the town Seyo where MfM recently constructed a rural town water supply system. At this stage, the research objective was focused only on the question of how capability enhancing a rural town water supply for women really is, reflecting the assumptions and thinking in donor-supported NGO projects: the idea is that piped water will lead to the empowerment of women. Research articles which used qualitative methods in order to assess the capability impact were found. Other qualitative approaches used by researchers to assess the impact of development projects on women were taken into consideration: for instance Sabina Alkire used participatory methods for the assessment of wellbeing and functionings of three small scale development projects for women by Oxfam in Pakistan (Alkire, 2002). To analyze the capability enhancing impact of goat rendering, rose garland production projects and female literacy classes, Alkire conducted focus group discussions where the women told the researcher the valuable and negative impacts they noticed through these projects. According to the author's then primary research objective, interview guidelines for semi-structured interviews with women, experts and focus group discussions were designed.

During this process it was decided by Utrecht University that travel to Oromia due to ongoing unrest and political violence in that region was not permitted. Together with MfM, I searched for an alternative water project: Lemi town water supply in Amhara Region. This project is technically identical to Seyo and equally suitable for the research objective: The water supply serves a small town which allows to have a variety of opinions and implications for the beneficiaries. For example a smaller supply water system such as a spring development and shallow well may only serves a small community of farmers and pastoralists. At this stage my research was driven by the assumption that the access to water has various effects on female empowerment and in order to have a large variety of opinions, I chose to conduct the research in a small town setting. Furthermore, I chose this project because it was finished in 2018 and I hoped to get a comprehensive before-after setting. In addition to that, Amhara Region was at that time politically more secure and the risk of ending up in a tense or maybe dangerous situation was lower than in Oromia Region.

3.5   The second phase: Data collection in Lemi

The research began in Addis Ababa in early March 2021 with a visit to MfM's main office. This was necessary to discuss the research objective with the NGOs management and also to organize the transport and accommodation for me and the interpreter. One week later the journey with an NGO vehicle to the project area began. The first day in Lemi was used to explore the town and its people as well as the water supply system. Despite several visits to Wogdi Woreda, this was the my first opportunity to see the water supply system in Lemi town. It soon became evident, however, that the water supply system was not operating and the responsible project manager confirmed that this was because of an electric pump that broke down three weeks earlier. The manager said that MfM was organizing a mechanic from Addis Ababa to come to Lemi for the repair. Not one of MfM's staff had said in advance that the water supply system was not operating. During the first day in Lemi informal interviews with the local population and project staff were conducted. These conversations made clear that the problem of the non-operating water supply was of much bigger concern, and more complex, than first anticipated. The conversations indicated uncertainty and frustration among the beneficiaries because of the lack of drinking water. The question of how a sustainable operation can be established was added as a primary research objective. For this purpose it was necessary to adjust the interview guidelines for the women and the discussion with the WASH committee.

3.6   Selection of interview partners

After the research objective had been adjusted, I began with the interviews in Lemi together with an interpreter. At first, MfM offered to select female interview partners this was rejected because of doubts concerning the neutrality of these chosen respondents. Because Lemi is a rather small town, it was convenient to walk though it and select interviewees purposeful because like anywhere else in rural Ethiopia, women and girls are responsible for fetching water. Therefore it was decided to walk from house to house; the interpreter asked if respondents if they were willing to participate in an interview. With this sampling respondents with ages ranging from 8 - 80 years were selected. The vast majority of women approached agreed to an interview. At detailed list of the respondents with age and position within the community is listed below. The members of the WASH committee were contacted by a MfM social worker and agreed to meet for the focus group discussion.

Nr.	Name	Age	Profession and Position
1	Alem	36	Housewife
2	Agerali	40	Housewife
3	Alem	40	Housewife
4	Almaz	65	Housewife
5	Ambawu	45	Housewife and Chief of water tap
6	Aynalem	25	Housewife
7	Aynalem	32	Petty trader
8	Habtam	25	Bar owner
9	Rahma	25	Housewife
10	Momina	60	Housewife
11	Simish	35	Primary School Teacher
12	Tobiau	80	Housewife
13	Zeneb Dini	35	Drinks vendor
14	Adem	30	Housewife
15	Amatella	40	Secondary School Teacher
16	Aselafu	45	Housewife
17	Bainekush	37	College student
18	Zeritu	40	Restaurant owner
19	Gimja	30	Housewife
20	Mulugetaye	45	Retailer
21	Sinet	35	Petty trader
22	Tigist	25	Coffee shop owner
23	Agaritu	55	Housewife
24	Emnet	40	Housewife
25	Mariam	27	Housewife
26	Tobia	70	Housewife
27	Tsehai	25	Housewife
28	Zawditu	40	Farmer
29	Fosia	13	Secondary School Student
30	Leila	14	Secondary School Student
31	Alhab	8	Primary School Students
32	Temer	28	Housewife
33	Mestawit	42	Housewife

Table 2: List of female interview participants

3.7   Semi-structured interviews in Lemi

In total 33 semi-structured interviews with women (Table 2) from Lemi and the nearby village Koye were conducted during the field research. Before the start of the interviews the interview guide was prepared with questions grouped according to the thematic chapters. The interview guide was adjusted throughout the research based on experiences with respondents. All interviews began by introducing the author and interpreter, explaining the aim of the study, and stressing the confidentiality of their answers. This was followed with some general questions in which the respondents were asked about personal information in order to confirm their eligibility for the research.

The objective of the interviews with the women was to gain a better understanding of how women perceive empowerment through improved access to drinking water. In order to give the women the freedom to express their feelings, emotions and their emic perspective, semi-structured interviews were chosen. The prepared guide was hence a guideline to take the interviews in a direction for acquiring most useful information. The semi-structured approach also gave women the possibility to express their opinion on the broken water supply system and how the different involved institutions dealing with that. All interviews took place in Amharic since none of the women spoke English. For that purpose the interpreter translated the questions and the answers from Amharic into English. The interpreter is a longterm personal friend who also speaks German fluently which was sometimes very helpful to talk „off the record" in the presence of MfM staff. The interviews always took place in the house or the attached garden of the participating women in order to ensure a familiar and relaxed atmosphere.

The length of the interviews with the women in Lemi varied between 20 - 60 minutes. The differences in length were dependent on the information the women provided. All interviews were recorded with mobile phone and at the same time notes were taken. The data was later transcribed with the help of a software. Although the software was a great help, it was still necessary to listen to every interview and correct spelling and proper names. The transcripts of the interviews were read carefully several times in order to gain an overall sense of the data and to be able to write down the first insights. For the coding process, Nvivo was used as well for the coding of the data, because the program has the ability to find valuable relationships and patterns within the data. The coding process began with filtering the relevant data and labeling with the following codes: Social improvements, social problems, time benefits, time use, possible capabilities, no improvement. The data under the overarching codes was then divided into smaller groups of data with new codes. The process of re-reading, re-coding and re-interpreting the interviews was repeated several times until and codes were selected. This process for transcripts of interviews and focus group discussions formed the basis for the analytical and empirical chapters of this thesis.

Concept	Variable	Indicator	Examples for possible capabilities
Increased capabilities for women through a rural town water supply	Resource	Physical availability of water?	Satisfied thirst
	Water quality	Is the consumption of water safe?	Improved health and hygiene
	Water quantity	Enough water for everyone and every purpose?	Less social stress
	Access	Distance to water supply? Time needed for collection?	Gain in time for other activities (leisure and work)
	Capacity	How community manage the water?	Women part of water committee
	Use	For what else is water used?	Water used for income generating activities

Table 3: Operationalization of Concepts

3.7.1   Focus group discussion in Lemi

As mentioned before, MfM staff informed the members of the WASH committee to meet the me and the interpreter on the last day of the field research in Lemi. That the meeting was organized by MfM staff most likely raised expectations among the committee members. The focus group discussion was conducted in the meeting hall of the town administration building. 20 members of the WASH committee came to the discussion. Although mentioned in the project proposal, no female members of the committee were present. After introducing the research objective and asking for consent for recording, the discussion was initiated with some open questions. The aim of the discussion was to gain insights into how the community in Lemi perceives and assesses the current situation with the town water supply. It was also of interest to see how the committee members interacted with each other during the discussion. It can be assumed that the high interest in the discussion can be traced back to expectations by the community for further assistance through this research. Therefore the members of the WASH committee were actively participating in the discussion, even though it was difficult for the interpreter to translate every argument carefully because the participants sometimes talked across each other.

3.7.2   Expert interviews

After the primary data collection in Lemi, an extensive in-depth interview with the WASH coordinator of MfM in Addis Ababa was conducted. The aim of this interview was to use the data gathered from Lemi and find out how the implementing NGO assesses the situation. Because the WASH coordinator is fluent in English no interpreter was needed for this interview. The interview took place in the office of the WASH coordinator where we were undisturbed.

Another expert interview was conducted with a former UNICEF staff member who worked in the water sector in Ethiopia. I chose UNICEF because through my personal network I had connections into this organization and also expected different opinions by this fairly large organization. The purpose of this interview was to widen the view of the research topic and to get insights from the perspective of a multilateral institution like UNICEF. This particular expert interview was the only one which was conducted via Skype. The analysis and coding of the expert interviews followed the same procedure as the semi-structured interviews in Lemi.

3.8   Research Limitations

In the following chapter the most important shortcomings of this research will be outlined. The first limitation of this research is the limited availability of time and resources, which was the reason that the field research in Lemi was only possible for 10 days. This time period was agreed with MfM beforehand because the organization had to facilitate necessary logistics such as transport and accommodation. Ethiopia is currently in an unstable situation and even though the security situation in Amhara Region was calm during the research visit, it was not advisable to stay longer than necessary. The budget for accommodation and compensation for the interpreter was calculated before and also did not allow for a longer stay in Lemi. The cost for accommodation and food was entirely paid privately by myself. These time and financial limitations contributed to the fact that the field research had to be conducted in a tight time-frame what could mean there is a risk that important data or insights are missing. It was also impossible to return for follow-up research because a it takes 11 hours by car from Addis Ababa to Lemi and the vehicle plus the driver were provided by MfM.

The second limitations concerns the positionality of the researcher. As already mentioned before, I was employed by MfM before and this had clear implications for the responses of the beneficiaries in Lemi. It was common that respondents thought that I was an MfM employee conducting an internal project evaluation. Even though the interview participants were informed that the research is independent, some respondents tried to give the „right" answers to the questions. Those „right" answers were often related to the functionality of the water supply, water fee related questions and

about MfM as implementing agency. Therefore it was necessary to have a wide range of respondents that were selected by myself. In addition to that is the fact that I previously worked as Public Relations Coordinator for MfM. Back then it was my job to report entirely positively about the project work in order to generate more donations for the organization. It turned out that it was difficult at the start of the research to maintain neutrality and also to develop the ability to be critical towards the work of MfM.

Another limitation was related to the use of an interpreter. My basic Amharic were not sufficient enough to conduct the interviews independently and so it was convenient to use an interpreter capable of translating the statements into English. To keep the research as neutral as possible I preferred to use an external interpreter with no relation to MfM or the people in Lemi. However, the interpreter did not always translate word by word, which meant that potentially important information may have been lost. The use of an interpreter was particularly challenging when it came to conceptualizing the interview guidelines in order to direct the interview towards questions of empowerment. It was difficult to translate concepts like empowerment into the real life experiences of rural Ethiopia. In order to bring this concept into the women's reality I rather asked for dreams, beliefs, social relationships and future plans. But even that caused misunderstandings which influenced the participants' answers. In general it was challenging for the female respondents to articulate their feelings and opinions in full because many of them only gave short answers.

It is also worth pointing out that this research is not representative of the entire Ethiopian water sector. The research is only a case story of one project; the lessons gleaned, however, may be translated to other projects as well.

4.   Setting the context

The following chapters will provide information about the political and country-specific context in which the Lemi town water supply was built. For this purpose it is important to assess why this town water supply project was initiated and how it operates. In addition, MfM as the host agency of that research will be presented. This chapter concludes with more information on water security in Ethiopia and the associated gender relations.

4.1   Water situation in Ethiopia

Through massive foreign investment and loans, Ethiopia has undergone in the last 20 years a rapid economical transformation. However, the economic growth in Ethiopia creates a lot of demand for

this resource and diminished access can decelerate the economic progress. Having access to safe and clean drinking water within short distance forms the basis for every aspect of human and economic development. In 2016 the Ethiopian Central Statistical Agency (CSA) conducted an Ethiopian Demographic and Health Survey (EDHS) which contains the most recent data on demographics and health. This survey offers not only interesting data on fertility, family planning, childhood mortality; it also gives the most recent update on the question of water drinking supply in rural and urban areas. In total the survey offers answers from 16,650 households, 15,683 female respondents and 12,688 male respondents from the then nine regional states and two city administrations in Ethiopia. The discrepancy in development between urban and rural areas is clearly visible in the access to drinking water: With 43 percent of rural population receiving their drinking water from unimproved sources (i.e. rivers, streams), this number is still very high. 21 percent of the rural population obtain their drinking water from a protected well or spring. 13 percent of rural households use a tube well or borehole and 19 percent have access to a public tap. According to the EDHS only 3 percent of rural households have access to piped water into dwelling and yard. In comparison, 75 percent of urban households have access to piped water on their plot or nearby. (Figure 1) (EDHS, 2016)
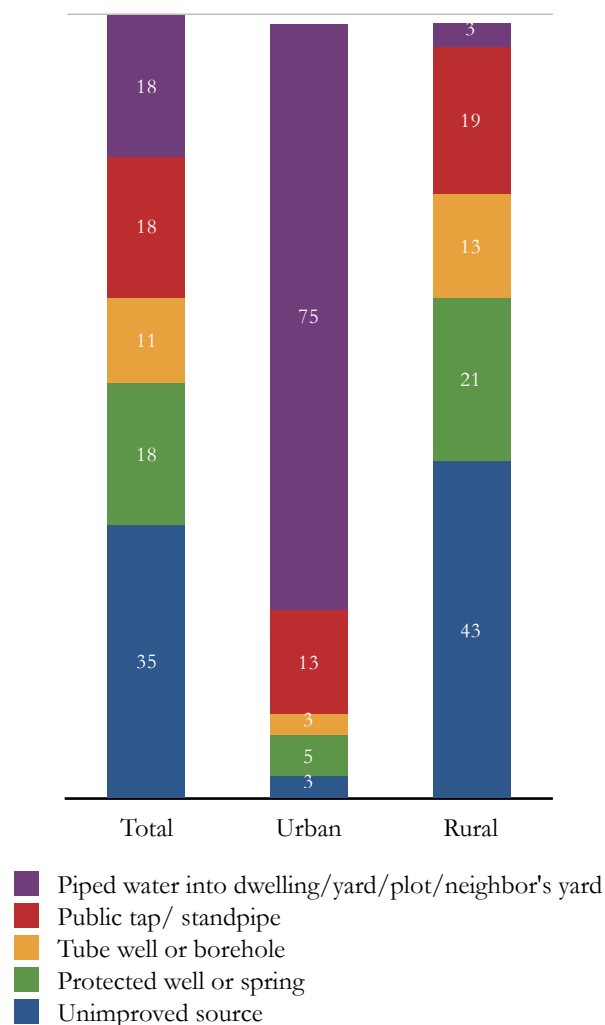
Figure 1: Household drinking water by residence (EDHS, 2016: 10)

Especially in rural areas with no improved access, the collection of water is a time consuming and physical stressful activity. The 2013 Ethiopian Time Use Survey (ETUS) was conducted by the CSA with support of UN Women and the Ministry of Women, Children and Youth Affairs. The objective of the survey was to measure and analyze the spent time on paid and unpaid work and leisure activities during 24 hours of male and females older than 10 years. In total 20,280 households from urban and rural areas participated in the survey. One chapter in the survey analyzes the time needed for fetching water. Here again are clear differences between rural and urban households. While in urban areas more than 80 percents of the participating households have access to water in less than one hour, the situation in rural areas is again the opposite: 56 percent of rural households have access to water in less than one hour, 37

percent of households travel 1 - 2.5 hours per day to get water. The remaining 15 percent of rural households reported a travel time longer than 2.5 hours for water. As mentioned, fetching water is in Ethiopia almost entirely done by women and girls. According to the ETUS, 81 percent of the water collectors are female. This time survey firmly underlines the time consuming character of this activity. (CSA, 2014)

4.2 The partner organization: „Menschen für Menschen"

„Stiftung Menschen für Menschen - Karlheinz Böhms Äthiopienhilfe" (MfM) was founded in 1981 by the German-Austrian actor Karlheinz Böhm and is a non-political and non-religious humanitarian organization. The NGO's mission is sustainable improvement of the living conditions for people in rural Ethiopia. Since its foundation, the organization has only operated in Ethiopia and currently has 10 project areas in the regional states of Oromia and Amhara. MfM is following an approach of integrated rural development in five different fields that are interlinked with each other: Sustainable Land Management, WASH, Education, Health and Human Development. The organizations development projects usually have a project duration between 10 - 15 years. Besides the integrated rural development, MfM got more involved in the recent years in the field of job creation through value chains and agri-business. MfM is also running a Agro Technical and Technology College in Harar in eastern Ethiopia. The vast majority of the funding is from private donations but in the last few years the NGO also received public funding from the German Federal Ministry of Economic Cooperation and Development (BMZ) and the German regional State of Bavaria. According to the annual report of 2019 the annual budget of the organization expenditure in its projects in Ethiopia was 9,8 million Euros. In Ethiopia, the NGO has 630 employees who are all Ethiopian. (Menschen für Menschen, 2019) Water, Sanitation and Hygiene (WASH) is one of the core focal areas of MfM's work in rural Ethiopia. MfM is not only constructing hand-dug wells, spring developments and rural town water supplies in its project areas; it is also conducting WASH trainings in schools and is giving workshops to members of local water committees.

4.3 Lemi: Location and characteristics

Lemi is located in Wogdi district (Woreda), est. 520 km North of Addis Ababa. (Map 1) This district has been since 2013 a designated project area of MfM. Wogdi has a total population of est. 150.000 and the major dynamics of land use are deforestation and overgrazing. The district of Wogdi borders in the north of South Wollo on the Woredas of Borena and Legambo, in the South

on the Derra Woreda in the Oromia region, in the East on Kellela Woreda of South Wollo and in the West on the Woredas of Shebel Berenta and Enarjina Enawga in the East Gojam Zone. Wogdi Woreda covers an area of 1,122 km and consists of 39 municipalities (Kebeles) of which 34 can be described as purely rural and the remaining 5 semi-urban / urban. The average altitude is 2,496 meters above sea level. Lemi has a population of 2,840. The small town has a health center, a health station, a veterinary clinic, a primary and secondary school, a cellular network and a power supply through hydropower via the national supply system. The main economic activities focus on agriculture with grain production and animal husbandry. The people in Lemi are mostly ethnic Amharas, and Muslims. (MfM, 2015)

Map 1: Location of Lemi in Ethiopia (Source: Google Maps)

4.4 The initial situation

The water situation in Lemi can be described as already difficult before MfM began to construct the town water supply system. The area has a history of drinking water project interventions going back to the 1970s when the Ethiopian government constructed a first shallow well in the town. But this water supply was only operating for a limited time and broke down which shows that Lemi also has a history of failures in this particular sector. The old existing borehole couldn't be integrated in the new water supply because the electromechanical system was installed over 30 years ago. The combustion engine had an extremely high diesel consumption with a low operational efficiency. A combination of both systems would have a negative impact on the water tariff and sustainability. In addition, the borehole with a depth of 36 m is much too shallow and the water pipes are old and leaky. Of the 3,340 people in Lemi and the nearby village of Koye, only 780 had access to drinking

water, with a water point with six taps supplying 250 people. Thus, drinking water was only available for 27.46 percent of the population directly in Lemi or 23.35 percent (including Koye). MfM conducted a baseline study which came to the conclusion that there was only a very limited or no access to drinking water from protected sources in Lemi. The majority of people in the area obtained their water from unprotected sources such as rivers and ponds where the water is often contaminated. The sources

Picture 1: Girl in Lemi (with yellow jerrycans) on her way to fetch water from an unprotected source

of contamination could be traced back to poor basic sanitation and a lack of hygiene. The common causative agent for viral diarrheal diseases is the Rota virus, which is also responsible for most of the deaths in children under 5 years of age. Bacterial diarrheal diseases include Shigella and Salmonella. Protozoal diseases are based on amoeba and dysentery. There were also many intestinal diseases caused by worms from unsafe water sources. Despite the health related problems, the lack of improved drinking water access creates also further problems in Lemi. Some male and female school students were not able to join classes regularly because they were sent by their parents to fetch water from distant sources. The lack of proper washing facilities (i.e. sinks and latrines) in schools also causes that girls who have their period don't want to go to school which has direct consequences on their educational performance. Additionally through the shortage of drinking water, business concepts such as water trading became a valuable source of income of some people in Lemi. These traders are using donkey carts to fetch water in jerrycans for people in Lemi who have no capacities to obtain the water by themselves. Depending on the distance of the source, the cost of one 25 liter jerrycan can vary between 80 - 100 Birr (1,50 - 2 Euro).

4.5 Technical aspects of the Lemi town water supply

The water supply system which was built by MfM connects not only Lemi but also the town Robite which is 5 km away. However, this research only considers the water supply in Lemi. The water supply system for Lemi and Robite was designed in such a way that both inhabitants of the towns

and some members the communities between Lemi and Robite participate in it. A baseline study showed that there is good „technical" groundwater potential with a certain depth, which can be used for the planned water supply. The water is pumped up from this borehole of the reservoir (Picture 2) and is forwarded to a reservoir in Lemi. By gravity the water is distributed to Lemi, Robite and the villages in between. Due to the force of gravity, there is sufficient pressure between the reservoir and the last water extraction point in Robite. In Lemi, there are total 10 public water delivery points (Picture 3), 4 in the village Koye, 3 in Lemi Primary and Secondary School, 2 toilets in Lemi Primary School and kindergarten as well 2 public showers.

Picture 2: The water reservoir in Lemi (Source: MfM)

Picture 3: One of the ten public delivery points in Lemi

5.   A rural town water supply - One project, different meanings

This chapter is based on the information and data collected during the research trip in Ethiopia as well as on policy documents such as project proposals. The purpose of this chapter is to examine how MfM seeks to ensure sustainability for the Lemi town water supply. Therefore it is necessary to take a look on the process of implementation and analyze the roles of involved institutions like MfM, the WASH committee and the Woreda administration.

5.1   The process of implementation

In order to put the information which were gathered the field research in the right context, it is important to analyze on the steps in the process, the context and the assumptions under which Lemi town water supply was implemented.

The construction of Lemi town water supply didn't came out of nowhere. Since 2013 MfM is operating with its regular project activities in Wogdi Woreda. For MfM this is a convenient setup because the NGO has already a project office, staff and necessary logistics in the area. According to the project documents the construction of Lemi town water supply is in line with the agenda of the Amhara Bureau of Finance and Economic Development (ABOFED) who is the major partner for MfM regarding identification, implementation and evaluation of projects. *„The MfM project regions in Borena and Wogdi have been working closely with ABOFED for several years. This concerns the project identification and continues with the planning, implementation, monitoring and evaluation of the achieved project goals."* (MfM, 2014: 10)

According to MfM's website, seven rural town water supplies were built in the last 40 years in Ethiopia and so these projects became a part of the NGO's activity portfolio. (MfM, 2021) The Lemi town water supply project was inaugurated in 2017 and by that time MfM received annual 1,5 million Euro public grants by the BMZ for different projects in Ethiopia. Like any other major donor, the BMZ has strict requirements for project proposals that NGOs have to fulfill in order to receive the funding and this was also the case for the Lemi town water supply project. These proposals for BMZ project funding are strictly standardized forms in which at some points applicants are required to explain i.e. impact measurement in less than 10 lines. (BMZ, 2021) On 31 pages MfM had to explain all technical, administrative and financial aspects of the water supply project but a substantial emphasis is on the question how sustainability can be guaranteed. It is clearly visible from the project proposal document and the subsequent proof of usage how MfM needs to approach the water project and its outcomes in a very technical manner. This technical

approach, with its clear defined goals and desired results, can be seen in the following example of the impact matrix from the project proposal:

Output	Indicators	
	Before	Goal
1. Improving access to safe drinking water	Three extraction points in Lemi and a small spring in Robite only supply a fraction of the population with drinking water. Showers don't exist.	- Completion of a well - Laying of a 3.6 km main water line and 11.5 km distribution system - Construction of 18 water intake points - Construction of a public shower system and two shower systems in schools
2. Increased supply of households with clean drinking water	1.080 Persons	5,840 people have at least 15 liters of water per day available all year round
3. Establishment of an efficient and fully functional water management system	2 water committees	▪ 24 water committees were founded and trained for 3 days each. ▪ The executive body of the WASH commitee was trained in management tasks for 3 days. ▪ The technical departments (plumbing + generator operation) as well as operations and customer service were each trained for 7 days. ▪ The employees for finance and property management were trained for 4 days.
4. Reducing diseases caused by contaminated water.	9,1 %	The diarrheal diseases caused by contaminated water have decreased to less than 2%.
5. Increased educational opportunities for girls.	31 %	By the end of the project, the girls' regular attendance at secondary school (after primary school) had increased to at least 45%.
6. Significant reduction in the time it takes to fetch water	est. 1 hour	For all households in the project area, the time period for one-time fetching water has been shortened to 10 minutes.

Table 4: Excerpt from MfM's project proposal to the BMZ (MfM, 2014)

It is clear that various institutional layers rather generate a top-down effect in the case of water projects, starting from the top with the BMZ, the project's donor, followed by MfM as the implementing organization, down to the water committee and the Woreda administration. Indirectly that leads to a situation where all involved institutions follow their own agenda and interest. The BMZ acts as the extension of the German government and needs quick results that justify Germany's international development policy. As a donor driven organization, MfM needs urgent funding from a donor like Germany and is under pressure to deliver these results quickly in order to secure that next funding. Therefore, a water supply system is implemented in a tight time frame after a standardized procedure that leaves little space for case-specific adjustments as illustrated in the impact matrix above. Because training and participation is part of this procedure, the

community contributes with labour and a water committee that in theory ensures sustainability and simultaneously empowers women. Regarding female empowerment, MfM assumes that the improved access to water will reduce time-poverty and women will use their gained time for household duties and support of their husband: *„Socio-economic advantages arise because women have more time for the household, raising children and helping out on the field."* (MfM, 2018: 17)

MfM's approach towards sustainability is based on community participation and cooperation with the local administration. This approach should prevent the risks of failure: *„Political and institutional risks can be avoided through the participatory approach - all stages of the water supply project are coordinated directly with the beneficiaries. The community representatives, regional institutions and government agencies are directly involved. Social risks are reduced to a minimum through constant involvement of the beneficiaries, also taking into account the poorest of the poor."* (MfM, 2014: 3) According to the project proposal the constant involvement of the community creates a sense of identification with, and ownership of, the project. The community participation element includes advice during the drilling of boreholes and the provision of workforce and local construction materials. This was also confirmed by Mr. Bezabih Alem, MfM's WASH coordinator: *„But coming to Lemi-Robite water supply system, the communities are involved in excavation or the pipeline system that improves the distribution and the transmission. We also appreciate seeing the community looking after the property of the contractor when the drilling rig was delivered to the site during the drilling. Or that they are making access road to the drilling site." (Interview Bezabih)* The second basis for sustainability is the close cooperation with the local administration and the regional government. While MfM is the implementing agency, ABOFED is the projects executing agency on a regional level and controls planing, booking and administration of all received funds that are generated. ABOFED is MfM's superior partner and keeps control of all NGO projects in Amhara region to ensure that they are in line with the national development strategy. In Wogdi Woreda, the Amhara Bureau of Water Resource Development (ABOWRD) is responsible for the potable water supply and therefore the direct partner when it comes to the implementation of the water supply. Additionally, ABOWRD is in charge of operation and maintenance of water supply systems as well mobilization and coordination of WASH committees. In regard to the Lemi water supply project, the project proposal highlights this responsibility as follows: *„The water supply project will be implemented in close cooperation with the Woreda Office of Water Resources and Development and the municipalities, and the Water Office is also responsible for continuing and pursuing sustainability."* (MfM, 2014: 10)

Following models of „demand-driven development" in donor and government policies, projects are envisioned to be implemented in response to a „demand" from potential beneficiaries. In practice, government and NGO officials actively search for potential sires of intervention, soliciting interest among people and explaining to them how they can put forward a „request" at the local authorities and fill the paperwork.

The last aspect to ensure sustainability is that the community and the local administration assure in a written contract their demand for and commitment to the project. The community confirms their

demand for potable water and assures that they will provide labor and local construction materials. In this contract the administration also agreed on the cost takeover for a transformer (10 percent of total project cost). „*We need to have from them a written document expressing their demand that says that they need a potable water supply system and they will take a share. Both in labor and also the promise of the the government that they support the community. So, all those things and all those promises are part of the insurance for sustainability.*" *(Interview Bezabih)*

5.3   The WASH Committee

MfM, similar to interventions of other NGOs, envisions the establishment of a so-called „WASH committee" as a core strategy to facilitate „community integration" of the project among beneficiaries. The project proposal summarizes that as follows: „*The WASH committee, which consists of women and men, will receive all necessary instructions on organizational, functional and maintenance issues of the water points and must at the same time take responsibility for the proper use of the water supply points.*" (MfM, 2014: 20) However, in meetings with the WASH committee, no female member was present and the men stated that the women were busy with their household duties. The members of the WASH committee explained how many they were and what kind of training they received: „*From general assembly around 14 people were selected and these 14 people received a training from MfM. The training was on different topics, such as: how to use properly water, how the women should use water properly and also if there is some damage, how to repair and also how to calculate the amount of water to be sold. Also, how to calculate the income and expenditure and to calculate how to do that. We received a lot of trainings for that.*" (Interview male WASH committee member, March 2021)

In order to foster the integration within the community for the water project, MfM cooperates also with traditional customary organizations such as „Idir" and „Mahber". Idir is a traditional funeral association and Mahber is an Ethiopian-Orthodox deacon association. The project proposal states that the two organizations shall motivate the community to participate in the construction of the town water supply. However, Idir and Mahber do not play a role in the selection process for WASH committee members. „*As existing institutions, IDIR and MAHBER are not directly involved in the selection of WASH committee members, but they create environmental awareness and promote the establishment of the committees because they emphasize their role and benefits for the general public. In this respect, they play an important role in the sustainability of the project work.*" (MfM, 2014: 20) During the focus group discussion with the WASH committee, the members confirmed that the Idir supported the construction of the water supply but declined that for the Mahber. „*We are a Muslim community and we don't have Mahber because this is an orthodox-christian association. But our elders and Imam supported the people for this project.*" (Interview male WASH committee member, March 2021)

The project proposal confirms the various trainings fo WASH committee members. According to that document, all members received a three day basic training and the executives of the WASH committee received another three day training about management. The technical departments such as plumbing and generator operation as well as operations and customer service were each trained for seven days. The committee members for finance and property management were trained for four days.

Even though the WASH committee was satisfied with the basic training they received, it is still challenging for them to organize the repair of the broken electric pump. For example, the WASH committee complained that they do not have full control of the money community members collect through the water fee. The decisions by the Woreda Water Bureau would take too long and additionally the officials on the Woreda level do not see the urgency of replacing the broken pump. In their opinion this complicated the process of repairing the electric pump: „*The money which is collected from the water fee, we cannot decide about the money. So the decision is in the hand of the board. The board is not from here, they are on Woreda level. They are sitting on the Woreda level. They are not a member of this community. They don't know about the problem with the water here. If you call them and say, 'our machine is broken. We need such amount of money or we need this kind of material to solve this problem,' they say, 'oh, today I have no time because I'm busy, because I'm working for government. And this guy goes home and he has his water. They are sitting on the Woreda level and every decision about the money must made by them.'*" (Interview male WASH committee member, March 2021) Unfortunately it was not possible to contact the Woreda administration (district administration) about these allegations. Mr. Bezabih Alem, the WASH coordinator of MfM, however confirmed that the Woreda Water Bureau is responsible for assisting the WASH committee with this issue: „*The WASH committees don't have any vehicle to take out the pump and bring it to Addis, so they depend on the Woreda office. Of course, the Woreda by proclamation is responsible to assist technically.*" (Interview Bezabih)

5.4   Recriminations and dependencies

During the field research it became clear that the question of how to ensure sustainability for the Lemi town water supply was at heart an issue of responsibility. Once it was known that the broken electric pump had to be replaced, MfM assisted the community in bringing a technician from Addis to replace the pump. Although the new pump was entirely paid by the water fees the community collected from the beneficiaries, the process contacting and organizing the technician to come to Lemi was conducted by MfM. That raises a question: how confident is the community about future operation and maintenance? One member of the water committee answered as follows: „*The future of the water supply in this area is difficult. If MfM leaves this area everything is going to break down.*" (Interview male WASH committee member, March 2021) From the WASH committee's point of view, the

experience with the broken electric pump had shown them that they were unable to perform repair works beyond their scope and that they could not rely on the Woreda administration to support them. This indicates clearly that the project is from the communities perspective not sustainable at all. The WASH committee wanted MfM to stay longer and to train specialized technicians for diesel and electric generators. *„The main thing is, for the generator with a diesel motor and for the electric for both, MfM will have to train somebody and bring them to live here, for example in the Woreda."* (Interview male WASH committee member, March 2021) For WASH coordinator Mr. Bezabih Alem, the statements by the WASH committee indicate a form of dependency. He stated that this is a common reaction by beneficiaries in areas of humanitarian or developmental intervention, and he acknowledged that this dependency can become something negative. *„The good part is, that this indicates that we're agreeing with community and it indicates that we are successful with the demand treatment approach. So the community by itself beliefs us, that's our approach. Besides that, it also has a bad aspect. So you can take this one as it is."* (Interview Bezabih) From MfM's perspective the community in Lemi is on the „right track" and there are no doubts that the sustainability of the water project could not be secured. But this statement by Bezabih also indicates a certain carelessness about the project and even acknowledges the *„bad aspect"* that this particular intervention may not be sustainable. According to the WASH coordinator, MfM checked for a year after the completion that the newly established WASH committee was performing its duties in accounting. And it was confirmed also that they were moving on the right track: *„For example, for Lemi, for one year w were checking their receipts, measure, booking systems and the fee collection and we also checked their bank account. And then we saw that they have 1 million Birr collected within one and a half years. So this is not a small amount of money. So that money could replace even the pump and a generator."* (Interview Bezabih) In other terms, MfM observed how the community is handling its duties for one year and decided that this is a sufficient reason to assume that the project is sustainable. However, this assumption excludes the fact, that MfM is still active in the project area and the community can reach out easily to them anytime when they have an inquiry.

6.   Women's empowerment

The second thematic chapter of this thesis deals with the question of how the rural town water supply in Lemi affects women's capabilities and empowerment. Because they are the main water collectors, the improvement women's livelihoods is the focus of many water interventions. The justification of these projects comes with the assumption that improved water access enables women to have more time for other activities, thereby increasing empowerment. Therefore it is critical to use the data collected from these interviews with women in Lemi to analyze how the water supply affects their capabilities and the possible impact on their empowerment. Similar to the WASH committee, the women who have been interviewed perceived the questions as part of an

internal evaluation. Even though they were informed before that this is not the case, the women tried to give „right answers" to my questions. The reason for that is due to my personality as a male white researcher and that the research was facilitated through MfM infrastructure which gave the woman this particular impression.

6.1 Water insecurity and time poverty in Lemi

Before the construction of the water supply system, water collection was a time consuming and physical exhausting activity, which it is again after the recent break down of the system. Water was collected from unprotected common sources such as streams and ponds located in the lower altitude outside of the city. According to the interview participants, the water quality in these unprotected open sources is bad. The women reported that they and their family became sick after consuming this water. „*The water is really dirty there but we don't have a choice.*" (Alem, 36) Even though some women reported that they cooked the water before usage, many stated that the consumption made them sick. „*The water from there is very dirty and we got sick sometimes from drinking it.*" (Aynalem, 32) The long journeys of fetching water and the limited amount the woman were able to fetch caused many problems within the households. During the field trip in Lemi, all female respondents confirmed that this activity was very time intensive because of the long distance they had to travel to these sources. The average time to fetch water was between three and seven hours everyday for travel both ways. Especially in the dry season from September until May, the women had to walk even longer because nearby sources dried out. In order to have enough time during the day for other activities some women get up very early in the morning to fetch water. The women usually carry one jerrycan with 25 litres volume, which must be used for all different household activities including cooking and washing. One respondent described how she even could not wash herself and her clothes regularly because she had no time and enough water for that. „*In the night at three o'clock or four o'clock, I go there with my jerrycan. Sometimes I get water, sometimes I don't. I never have time to clean my clothes and my family's clothes so that we are looking clean. I never have time to wash even myself, because I am thinking I leave it today because I need the water for something. I was always dirty.*" (Habtam, 25) The long absence of the women for fetching one jerrycan of water caused delays in the daily routine of the family. In particular the lack of water to wash clothes is described as one of the most negative outcomes of the water insecurity: „*One time all clothes become dirty. We cannot bring the water and wash here because the water is not enough. So I took my children and my husband, all the family, to carry the dirty clothes and go there to wash them at the river for the whole day and we returned very tired and hungry.*" (Amatella, 40) The respondents explained that they were not able to prepare food in time for their families and that this often ended verbal arguments and even in one case in physical violence against the women. „*I always had fights with my husband because the breakfast is too late, because it takes so long for me to fetch water. When the*

food is not on the table he also beats me." (Aynalem, 24) Some women described how their daily fear of not getting enough water dominated their life and that this was the main cause for fights with their husbands. *„We quarrelled because either I didn't cook in time, or I am not clean. Or I don't clean the children. Or I didn't fetch enough water that he could clean himself. Every fight we had was because of the water."* (Zeritu, 40) Besides adult women, young girls are also responsible for fetching water. This has, in many cases, a negative impact on their education because they miss classes and are at risk of failing their exams. The youngest respondent explained her situation as follows: *„I can't go every day to school because I have to get water for my family. My mother can't go because she is busy in the field."* (Mahlet, 11)

6.2   Female Empowerment

With the finalization of the water supply system in 2018, the situation of women and girls improved significantly, albeit the system broke down soon after. Not only, the women explained that they have more time but also their health improved due to the enhanced water quality. Public taps to obtain water are now within five minutes walking distance from the every house in Lemi. Furthermore, some households in the town are connected to the water supply with their own tap on their compound. When the water supply was operating in Lemi, this had a distinct impact on their daily routine.

The vast majority of women interviewed reported that they gained through this improved infrastructure more time for other activities, which range from simply resting, taking care of the children to even education and income generating activities. Previous problems related to the lack of water and the long absence of women disappeared, as one women described: *„The access to water solved a lot of small quarreling at home because of the availability of water, because I can do everything on time. There was no quarrel with my husband and the children are not crying because they are hungry, and get their food on time."* (Emnet, 40)

The additional time enabled the women to think about to improving their life in economic terms, too. During the interviews some women described empowerment as a means for them to earn their own money, and of independence to decide what to do with it. It is quite common among the women in Lemi to start a retailer business for agricultural products. This kind of petty trading does not require any kind of further education and can be easily practiced. *„I go to the villages where people have no time to bring their product to the market. I buy there and for a little bit of profit on that I sell on the market. And this I only can do because I have more time. I'm doing this by myself."* (Aynalem, 32) However, some women used their additional time to visit an educational institution, but recognized that the possibilities for economic independence are very limited in an area like Lemi. During the field research women complained that no bank is providing them with sufficient credit to start a larger business such as a shop or a restaurant. *„Now when I get the time I started to think about my future. The first*

thing I thought to do is to go to college in Wogdi and to study management. Now I have a diploma. But I didn't got any job because there is no job in this area. But my wish is not to be hired by somebody and to work for somebody. I want to manage my own business and for that nobody offered me any credit or any help." (Bainekush, 37) It is worth pointing out that MfM is providing microcredit programs for women in the area but not every women was eager to participate. The main complaint about that microcredit program is that the profit margin on the offered activities such as goat fattening is too small and not worth the effort. *„I'm participating in this but it is very difficult to make money. It is not enough, you have to pay every month from the credit some small amount back and nothing is left."* (Zeneb Dini, 35) It is worth to point out here, that Microcredits also mean to have micro debts, which can be another aspect of women's distress in developing countries.

In MfM's project proposal for Lemi, the organization plans to empower women through their inclusion in management roles in the WASH committee and as a chief of a water tap who is responsible for collecting the fee by the users. The women did not perceive these duties for the community as an empowering activity; as one women who is a chief of water tap described: *„It is only taking my time. It is volunteer work. I cannot say no because they built the tap in front of my house. When the water is here, I have to stay and count. Sometimes I beg someone to stay there and collect for me the money because I have to do something else. There is no benefit for me, it is just a service to the community."* (Ambawu, 45) This statement highlights the naive assumption of NGOs that women interests are served by giving them a voice in the committee or through other administrative duties. However this is essentially a deeply sexist assumption because there is no valid argument why a certain amount of woman want and should represent the interests of all women.

6.3   The freedom of leisure

Besides the economic and educational freedom gained through improved access to water, it is also important to note that empowerment means the freedom to rest or to use the time for leisure. The immense physical burden of fetching water every day for three to six hours caused physical exhaustion among the women in Lemi. Therefore some women reported that they used the time time for non-income generating or family care-related activities. *„When the water came, I had finally more time to rest!"* (Agerali, 40) *„I enjoy just to simply rest!"* (Tsehai, 25) Another women reported that she used to refuse to have sex with her husband because she was too tired from fetching water. When she had an own tap on her compound this situation changed, as she reported: *„Now we are doing whatever the marriage needs and I'm not so tired to say every evening no to him."* (Mariam, 27) These statements also stand in stark contrast to MfM's assumption that an improved access to water will increase the economic and household activity among the women. However, to simply rest or having a good time with the husband has definitely a positive impact on women's general wellbeing.

## 6.4	Critical consciousness

The technical problems of the water supply that finally led to the disruption caused anger and frustration among the women in Lemi. Not only because they had to walk for hours again to get water for their families, but also because water traders made a business selling water for high prices. The unreliability of the water supply and the slow progress in repairing it increased the frustration within the community. It is important to note here, that the majority of the respondents were reluctant to criticize MfM openly in an interview because they thought that I'm conducting an internal evaluation and belong to the organization. Only two women were open-minded and straight forward with their opinion about the project. One of them told me that the week before my arrival in Lemi, the women organized a demonstration to the Woreda administration where they demanded the urgent repair of the water supply. The women described that as follows: *„Everybody is shouting! Me and other women organized a demonstration where we take the jerrycans and beat them with a stick and to walk from here to Wogdi. We organized everything. The water committee and the Woreda said, 'please don't do that. We are doing everything to solve these problems,' and they promised again, but nothing happened."* (Aselafu, 45) This immediate action by the women not only highlights the amount of desperation but also shows a form of critical consciousness that questions the current status quo. This unexpected form of empowerment goes beyond the typical, expected outcomes of water projects, and which will be discussed in more depth in the following chapter. In addition to that, this disagreement within the community is contradictory to the assumption of NGOs that communities are homogenous entities with an endless inner solidarity and consensus. Another woman explained her disappointment about MfM and its intervention in Lemi as follows: *„You are dreaming about the things you know. MfM showed us that the water can come in front of your door and that you don't need to walk for hours every day. But now they didn't built the thing (water supply) properly, and after we learned that you can just take it from the tap, we are forced to carry our water again. It would have been better not to built the supply at all because we were already used since thousands of years to carry our water."* (Agerali, 40) This statement is particular interesting because it clearly highlights not only the disappointment about the failure but also asks about the sense of the whole project. It is also contradictory to the assumption by NGOs that communities welcoming every intervention and share a unified opinion about that. This can be confirmed with the statement of another women who was very reluctant regarding the interview stated that she was not interested in the water supply at all: *„I don't care about the water (supply system)! I continue with my life like before. I don't need that. I don't want to change."* (Mariam, 27)

7. Discussion

The aim of this research is to identify how NGOs like MfM seek to implement sustainable water projects in rural Ethiopia. For this purpose policy and project documents were analyzed, interviews were conducted with beneficiaries, as well as with experts and secondary data was consulted. The insights from this data contributed in Chapter 5 to a comprehensive understanding of how projects in the water sector are facilitated with an emphasis on sustainability. In order to gain a deeper understanding of how women operate in this dynamic, and how they perceive empowerment, interviews with female beneficiaries in Lemi were conducted. Therefore Chapter 6 aimed to define the empowerment from the women's emic perspective. The following discussion chapter aims to connect these insights and place them in a broader political and societal context in order to give final answers to the research questions of this thesis.

7.1 Sustainability for whom?

The analysis of the project documents as well as the interviews with people involved have shown how MfM seeks to achieve sustainability of the Lemi town water supply. However, the interviews with the WASH committee and project staff indicated that there is a significant difference between the intended community participation in project proposals and the actual reality in the field. MfM is following the same agenda of other development agencies and anticipates community participation in water projects as key for sustainability. That after two years the water supply system is not operating reliably and the affected community struggles to manage effectively is consistent with with the common problems of community management. The outcomes of this research confirm that the sustainability of water supply projects is undermined by that.

The first difficulties can be found within the community: According to Moriarty (2004), these problems can range from community dynamics, social conflicts, to a lack of capacity. These capacity shortcomings of the community management can be found on technical, management or financial levels. In the case of this research, the WASH committee was not able to organize the repair of the electric pump by itself even though they had the financial capacities. Because no one in Lemi is able to repair the water system the community suffers from technical incapacities. This not surprising because it is considered that rural communities are able to handle 80 percent of the requirements to operate a water system and for the remaining 20 percent they require assistance from outside. (Moriarty 2004)

Analysis of the project documents furthermore indicated that MfM is calculating in great detail the impacts and the possible outcomes of the Lemi town water supply project. These technical

calculations and forecasts in the project proposal are necessary to receive the required funding by the BMZ. However, it also creates enormous demand to perform for MfM, generated by donor pressures and this leaves little space for flexibility in the project's implementation. This emphasis on procedures and guidelines is what Ika (2012) calls the „Accountability-for-Results-Trap" that can jeopardize a development project's success. Also, the case of MfM's project in Lemi shows that punctual and detailed reporting to an external stakeholder (BMZ) tends to be a higher priority than the management of the actual results in the field. Furthermore, it is questionable if MfM's project approach in water sector interventions is the suitable framework for long-term operation and sustainability. Besides the previous mentioned risk of emphasizing quick results, it also bears the risk that project approaches are used like blueprints. For example, MfM's approach for the implementation of rural town water supplies is basically identical in all locations. This can be seen through the comparison of the project proposal of Seyo town water supply and the one in Lemi. Although the geographical locations are different, the approach and the measures to ensure sustainability are the same. The instrumental use of blueprint project approaches follows the tradition of fields such as engineering and economics where project sites share the same characteristics and interventions can be just implemented upon that. (Ika & Hodgson, 2010) In the case of Lemi this could be seen, in particular, in how non-technical project activities such as training for the WASH committee were calculated, conducted and finally checked off.

All these aspects are symptoms of an overemphasis on upward accountability and the project in Lemi is just one case study of a much more complex structural problem: Since the 1990's NGO's like MfM transformed themselves from idealism driven organizations to international acting stakeholders who operate in a competitive market. Therefore it also no surprise that Tina Wallace asks the question if NGO's became „*Trojan Horses of global Neoliberalism*"? (Wallace, 2004) In other words, the cooperation of MfM with a major donor like the BMZ not only brings the NGO valuable funding to pay salaries of their staff in field but also makes them knowingly or unwillingly a carrier of policies and procedures of a global agenda. The increasing numbers of NGOs in sub-Saharan Africa from the 1990 on as well as *„Africanization of the NGO sector"* (Hearn, 2007) indicates that this sector became an area of employment for thousands of people and therefore transformed into demand driven market.

It is important to note, that funding by the German government makes currently only a comparable little share of MfM's budget and the majority of donations are still from private individuals. However, according to the German Federal Agency for Civic Education (BPD) the largest group of persons who are donating regularly belong to the 60 plus or „baby boomer" generation. (BPD, 2021) Thus the demographic change in industrial countries like Germany will radically transform the funding situation of NGOs like MfM in the next 15 - 20 years. If NGOs want to continue their operations with the same capacities, they will be much more dependent on institutionalized sources of funding like governments, international organizations and private companies. Hence, upward

accountability to donors will play an even more significant role and NGOs have to further align with the needs and agendas of these institutions. This also increases the risk that NGOs, for the pure purpose of survival, will follow these agendas and downward accountability towards „the poor" becomes only an ancillary priority. It can be concluded, that the current patron-client system in international development is mostly designed for the longterm operation or sustainability of NGOs.

7.3   Empowerment through failure

The second thematic chapter of this research deals with the question of how a rural town water supply affects the female empowerment in Lemi. Because the main water collectors in sub-Saharan Africa are women, water projects are often seen as an entry point into building up their capacities. Also, MfM anticipates in its project proposal that an improved access to water gives the women not only extra time for other household activities but will allow them to be an active part of the WASH-committee. Although women in Lemi participated in the trainings provided by MfM, no women who participated in the interview were active members of the WASH-committee. It was, furthermore, difficult to explain the concept of empowerment to the women in Lemi. Therefore it was necessary to rather ask for dreams, imaginations, wishes and future plans in order to get information about how the women perceive their situation after completion of the water supply system. The research has shown that all the women welcomed the water supply while it was operating, because all of them gained more time (and there is no doubt that their capacities for other activities were previously constrained). The interviews have shown that the gained time enabled them to think about their own future and how they can improve their personal livelihoods. This aligns with Naila Kabeer's conceptualization of empowerment where this can reached through the agency to make choices. (Kabeer, 1999) Because of severe time-poverty in the past, women in Lemi were denied this access and were therefore, in effect, disempowered.

According to Frances Cleaver it is too easily assumed that participatory approaches in development enhance the capacity of individuals to change their own lives and to facilitate social change. (Cleaver, 1999) Especially for women in Lemi, who are in a disadvantaged position, there is the assumption that access to water will change their life drastically. However, research has shown that although women were enabled through the access to water to increase their economic activity, they did not necessarily reach a stage of full economic independence or achieve a stronger counterweight to patriarchal society. Instead, women used their extra time for small scale economic activity such as petty trading or joining a micro-credit association. Indeed, this research showed that due to prevailing conditions in Lemi, economic growth is extremely limited. The interviews with the women also indicated that their contribution in the form of physical labor and their inclusion in

small management roles within the water system did not lead to the empowerment anticipated by MfM. Women rather perceived these as necessary community services that must be done regardless. The technical failure of the Lemi town water supply shifted the commonly held beliefs about empowerment through water access by triggering serious frustration among the women. The breakdown of the pump forced the women to again to fetch the water from distance sources or to be dependent on water traders. The unexpected outcome of this technical problem was that the women organized a demonstration at the Woreda water bureau to complain about its inability to solve the issue on time. However, this action by the women was a form of female empowerment unforeseen in any development project proposal. It seems evident that the technical failure triggered a critical perspective on the status quo among the women in Lemi which enabled them to consider questioning the prevailing social order. This *„critical consciousness"* in Freirean terms is a form of female empowerment as described by Naila Kabeer. (1999)

What these examples from the field research show is that female empowerment through water projects follow similar *„technical imperatives of efficiency"* (Cleaver, 1999) as presented in the previous chapter on community participation. It is again the rationalist approach, rooted in engineering, which anticipates that social change can be planned beforehand and hence calculated. In combination with time-limited project approaches, female empowerment has the tendency to become a buzzword. The collective action by the women to organize a demonstration shows that even a technically failed project can trigger a form of empowerment that goes beyond the typical assumptions of development interventions. This unintended consequence indicates that development projects typically do not sufficiently account the complex livelihoods and contexts of their beneficiaries. Furthermore, it also shows that NGOs like MfM are working naive assumptions about female empowerment and anticipate that women are willing to represent the interests of other women. The research also showed that women appreciate the improved access to water but on the other side perceive water related responsibilities (i.e. water tap management) only as a necessary service to the community without any empowering effect.

Conclusion

This research has aimed to assess how sustainable MfM's effort to implement a rural drinking water development project in Lemi really is, and how this affects women's empowerment. An analysis of the common approaches and project documents contributed to the development of a comprehensive theoretical embedding. The interviews with relevant stakeholders such as the water committee, users and experts gave useful insights into the dynamics that influence the operation of the Lemi town water supply.

In order to achieve sustainability of the Lemi town water supply, MfM relies on participatory approaches that actively involve the target population in the planning and construction of the system. This approach is based on the assumption that the inclusion of the community will create a sense of ownership and responsibility and therefore ensure a longterm future operation. For this purpose, men and women of the community received training in operation, maintenance and management related duties such as book-keeping. The project in Lemi was based furthermore on a contractual agreement with the Amhara water bureau which confirms that the regional government and its sub-authorities will assist the community in Lemi with operation and maintenance after MfM withdraws from the project area.

However, the operational problems of the Lemi town water supply confirms the limitations of participatory approaches and community management, as identified by researchers such as Schouten & Moriarty (2004), Cotton & Taylor (1994), Cleaver (1999). The most significant limitation in Lemi is the lack of external support by the government, which, in theory, is legally bound to support the community. It is therefore assumed that without the continuous support of MfM, the future operation of Lemi town water supply is questionable.

Because the project was financed in large part by the BMZ, MfM had to comply with the ministry's guidelines and benchmarks to receive funding. The overemphasis on upward accountability and delivery of quick results to the donor is not uncommon in today's development work, but means that the longterm sustainability of a water project like Lemi is undermined. Another aspect that was highlighted in this research is the role of projects as the usual framework for development interventions. Projects like the Lemi town water supply are designed in the Western mould of project management with calculated impacts and achievements in a limited time frame. It is hard to believe that in a time frame of one or two years an external organization could enable a traditional community to successfully operate and manage a water system. NGOs like MfM stand in between the communities, their donor the German government, which is not only paying for the project but also the salaries of the NGO employees. Although MfM receives still the majority of its funding from private donors, corporations within the government will become an increasingly important source of income in the future. Therefore small NGOs like MfM have to obey the rules and

regulations of their donors and become a „*comprador*" for these donors. Questions of long-term sustainability are thus secondary concerns.

The second thematic chapter of this assessed how the rural town water supply is affecting empowerment among the women in Lemi. In summary, it can be said that the operating water supply was a short-living relief for the women because it gave them more time during the day for other activities. This confirms the assumption of MfM and other researchers that time poverty has a capability depriving effect on women's lives and reduces their ability to make choices for their wellbeing and capacities. In addition, it had a positive impact on social relations with their family members and disputes related to the availability of water were reduced. The interviews with the women furthermore demonstrated that they perceive empowerment mostly in economic terms and seek to be financially independent from their husbands. However, they also recognize the limited chances their surrounding area can offer for going beyond small income generating activities. The approach of MfM to involve women in water supply related duties has not had a significant empowering effect (in the Freirean sense) because for them this was seen as a necessary service for the community. However, the technical failure of the water project and the setback for the women, who again lost their time benefits, triggered unexpected forms of social transformation. This confirms the opinion of Frances Cleaver (1999): that narrow project approaches often do not take sufficient account of the non-project nature and the complex livelihood interlinkages of users and beneficiaries.

Implications for further research

This research has shown the complexity of water development projects and also the limitations of the participatory approach used by MfM. It is obvious that some approaches used by MfM have substantial weaknesses for ensuring the sustainability of the water supply system. The high failure rates of rural water supply projects in sub-Saharan Africa underlines this. But there remains the question: what kind of alternatives do development actors have?

Development projects especially in the water sector need to explore alternatives for „artificial" institutions like WASH committees which are conceptualized according to Western narratives of development. It would go beyond the scope of this thesis to deeply assess how neoliberal concepts have shaped international development in the past few decades. But it is worth having a look at what alternatives exist for resource management. For example, it could be helpful to involve already existing arrangements for resource management and use local knowledge to build and reshape institutions. If institutions for resource management are built and shaped on the basis of existing „traditional" models they can be more robust as well as gain better acceptance in the community. So-called „*institutional bricolage*" could be a robust alternative towards abstracted formal institutional

models. The problem of „*institutional bricolage*" is that it is more time and cost intensive than straight line projects which are designed to deliver quick results. (Cleaver, 2001) The second alternative, which is already practiced in places, is the concept of scaling up. The idea, which was already elaborated in Chapter 2.1.6, could be another valuable alternative to narrow project approaches. The case of Lemi has shown that an individual community without the support of an external NGO is at the mercy of a weak local administration. The involvement of other stakeholders from the private sector and more districts would increase the demand and accountability for an operating water system. The results of UNICEF's ONEWASH Plus programme are promising but more research into the long-term sustainability and effectiveness is needed. However, a scaled up approach would also increase the need for larger financial and administrative resources. Therefore, it would be difficult for a single NGO like MfM to implement such a large programme by itself. But the NGO could extend its network and cooperate with other development organizations and contribute its valuable experiences to such a programme. Another idea can be to shift the provision of resources like water and water supply systems more towards the Ethiopian government. This would surely require immense capacity building within the government but would have the benefit that it is, (unlike NGOs) always present in remote areas like Lemi.

All these examples highlight the need for development actors like MfM to explore alternatives to narrow project approaches in water development, and to use their existing capacities to the full extent possible.

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Appendices

Appendix A: Sample interview guide women in Lemi

Introduction researcher, interpreter and research

- Introduction researcher and interpreter
- Aim of the research
- Ethics, Consent to record interview and to take notes

Introduction respondent

- Age?
- Where do you live?
- Are you married?
- Do you have children?
- (If so, how many?)
- Profession?

Water provision before the Lemi town water supply

- How was fetching water before the town water supply was built?
- Where did you used to fetch water?
- For how long you had to walk to fetch water?
- How much water (jerrycans) did you fetched per day?
- How was the quality of that water?
- Did you or you family had any health problems after consuming that water?

Changes after the completion of the town water supply

- Do have any role/position in the WASH committee or other water related duties?
- Can you tell me in general how your life changed when the water supply was finished?
- Did you had the impression to have more time for other activities?
- (If so, can you tell me what kind of activities these are?)
- Did the relation to your husband/father changed during that time?
- Can you name me other aspects how the water supply changed your life?

Problems with the water supply system

• Are there any problems with the cost of the water?

• How do you perceive the recent break down of the water supply system?

• How did the breakdown affected you and your family?

• How do you perceive the work of the WASH committee?

• How do you see the future of the water supply system?

Closing questions

• What are your hopes for the future?

• Is there anything else you would like to tell me?