

UNIVERSITY OF TAMPERE
Department of Regional Studies

TOWARDS A COMMON GOAL
The challenges of the sanitation sector in Zambia

Environmental Policy

Master's thesis

January 2009

Mentors: Yrjö Haila, Nina Tynkkynen

Mia O'Neill

UNIVERSITY OF TAMPERE

Department of Regional Studies

O'NEILL, MIA: Towards a common goal. The challenges of the sanitation sector in Zambia.

Master's thesis in Environmental Policy, 107 pages, 2 appendices

January 2009

This research aims at determining the main challenges of the Zambian sanitation sector. It defines the actors of the sector and studies their relations with one other. Furthermore, this study will aim to point out the overall effects of sanitation on society and environment. The main goal is to find out how to move on from pilots to long term projects in terms of sanitation development in Zambia.

The Year of Sanitation and the Millennium Development Goals of the United Nations bring up an important question of the state of sanitation in developing countries. Zambia, as a developing country, is depending on donors and other international actors for assistance in its development processes. Also the local and international non governmental organisations play an important role as advisors and implementers. The abundance of actors makes the sanitation sector very complicated to map out.

As sanitation itself is also a complicated issue to tackle, this research will approach from the view point of integrating sanitation to all relevant policy areas. This means that instead of limiting sanitation to one aspect of society, it is, in fact, a part of multiple other sectors, such as health, environment, society development etc. This view, of course, increases the number of actors involved in the sector.

The vast amount of actors active in the sanitation sector creates difficulties when dealing with responsibilities and power distribution. When a complex actor network is in question, it is challenging to determine the power structure of the network. This has caused problems amongst the actors as no one in particular is in charge, taking the responsibility for the overall picture. Additional dilemma is brought on by motives of the actors, as the actor networks can be formed for several reasons. All of the actors are working towards the same goal but with different views of what is the best course of action and the effects desired.

It is the conclusion of this research that the national state of sanitation is unbalanced, yet improving. The national policies are being prepared and cooperation between actors is being developed. Also the communities are being encouraged to participate in the sanitation work in their own areas. It is, however, first and foremost up to the government to manage the entire sector. When acting according to the Paris Declaration, the donors will support the government, and the government will in turn support the civil society. Eventually, it is a matter of good governance and cooperation.

Key Words:

Sanitation, actor, actor space, power distribution, practices, development aid, Zambia

TAMPEREEN YLIOPISTO

Yhdyskuntatieteiden laitos

O'NEILL, MIA: Towards a common goal. The challenges of the sanitation sector in Zambia. Kohti yhteistä tavoitetta. Sambian sanitaatiosektorin haasteet.

Pro gradu –tutkielma, ympäristöpolitiikka, 107 sivua, 2 liitesivua.

Tammikuu 2009

Tämä tutkimus käsittelee Sambian sanitaatiosektoria sekä sen kohtaamia haasteita. Tutkimus määrittelee keskeisimmät toimijat ja tutkii suhteita toimijoiden välillä. Lisäksi tutkielma pyrkii kartoittamaan sanitaation vaikutukset yhteiskuntaan ja ympäristöön. Pää tavoite on selvittää, kuinka siirtyä pilottiprojekteista pitkäaikaisiin hankkeisiin Sambian sanitaatiokehityksen kannalta.

YK:n julistamat sanitaation vuosi 2008 ja vuosituhattavoitteet nostavat esiin tärkeän kysymyksen sanitaation tilasta kehitysmaissa. Sambia on kehitysmaana riippuvainen avunantajamaiden ja muiden kansainvälisten toimijoiden avusta kehitysprosesseissaan. Lisäksi paikalliset ja kansainväliset kansalaisjärjestöt ovat tärkeässä roolissa neuvonantajina sekä toimeenpanijoina. Toimijoiden suuri määrä tekee sanitaatiosektorista erittäin monimutkaisen kartoittaa.

Sanitaatio itsessään on jo monimutkainen asia käsitellä, ja tämän tutkimuksen tarkoituksena onkin käsitellä sanitaatiota kaikissa toimintapolitiikoissa. Tämä tarkoittaa sitä, että sen sijaan, että sanitaatio rajoitettaisiin osaksi ainoastaan yhtä yhteiskunnan osa-aluetta, se on itse asiassa osa monia muita sektoreita, kuten terveys-, ympäristö-, sekä yhteiskuntakehityssektoreita ja niin edelleen. Tämä näkemys tietenkin lisää sektorilla toimivien toimijoiden määrää.

Toimijoiden suuri määrä sanitaatiosektorilla tuo vaikeuksia kun käsitellään vastuualueita ja vallanjakoa. Monimutkaisen toimijaverkoston ollessa kyseessä on vaikeaa määrittää verkoston valtarakennetta. Tämä on aiheuttanut ongelmia toimijoiden keskuudessa, sillä kukaan tietty toimija ei ole suoraan vastuussa, ottamassa vastuuta koko sektorin toiminnasta. Lisäongelman aiheuttavat toimijoiden motiivit, jotka ovat toimijaverkostossa muotoutuneet useista syistä. Kaikki toimijat pyrkivät samaa tavoitetta kohti, mutta heidän näkemyksensä parhaista toimintatavoista ja niiden vaikutuksista eroavat usein suuresti.

Tämän tutkimuksen johtopäätös on, että sanitaation kansallinen tila on epätasapainossa, mutta silti parantumassa. Kansallisia toimintapolitiikkoja valmistellaan ja yhteistyö toimijoiden välillä kehittyy jatkuvasti. Lisäksi yhteisöjä rohkaistaan osallistumaan mukaan sanitaatiotyöhön omilla alueillaan. On kuitenkin viime kädessä hallituksen vastuulla johtaa koko sektoria. Pariisin julistuksen mukaan toimiessaan avunantajat tukevat hallituksen toimia, ja hallitus vuorostaan tukee kansalaisyhteiskuntaa. Loppujen lopuksi kyse on hyvästä hallinnosta ja yhteistyöstä.

Avainsanat:

Sanitaatio, toimijuus, toimintatila, vallanjako, käytännöt, kehitysyhteistyö, Sambia

Table of Contents

FOREWORD.....	1
1 INTRODUCTION.....	2
1.1 ZAMBIA	3
1.2 GLOBAL DRY TOILET ASSOCIATION OF FINLAND IN ZAMBIA.....	5
2 DATA AND METHODS	6
2.1 EMPIRICAL DATA.....	6
2.2 THEORETICAL CONCEPTS	7
2.2.1 Social development and policy integration	8
2.2.2 Power distribution.....	9
2.2.3 The relevance of actors and networks	11
2.2.4 Actors in policy management	13
3 SANITATION – THE KEY ELEMENTS	16
3.1 THE EFFECTS OF SANITATION	17
3.1.1 Health effects	18
3.1.2 Social effects	20
3.1.3 Environmental effects	21
3.1.4 Measuring goals in sanitation.....	22
3.2 SANITATION IN ZAMBIA.....	23
3.2.1 Sanitation technology	26
3.2.2 Ecological sanitation.....	27
4 THE DEVELOPMENT OF THE SANITATION SECTOR IN ZAMBIA	29
4.1 ON RECENT POLITICAL DEVELOPMENT IN ZAMBIA.....	29
4.1.1 Decentralisation.....	30
4.1.2 Civil society.....	31
4.2 SANITATION AND GOVERNANCE	32
4.2.1 Sanitation policies	34
4.2.2 Sanitation and legislation	35
4.2.3 Sanitation initiatives.....	35
4.3 NATIONAL AUTHORITIES.....	37
4.3.1 Ministry of Local Government and Housing	37
4.3.2 Local Authorities.....	38
4.3.3 Ministry of Energy and Water Development	38
4.3.4 National Water and Sanitation Council and Devolution Trust Fund.....	39
4.3.5 Ministry of Health	39
4.3.6 Ministry of Education	40
4.3.7 Other ministries.....	40
4.3.8 Environmental Council.....	40
4.3.9 Commercial Utilities	41
4.4 DEVELOPMENT AID AND SANITATION	41
4.4.1 Aid harmonisation and sanitation	41
4.4.2 The Millennium Development Goals and sanitation.....	43
4.4.3 Sanitation projects.....	44
4.5 ACTORS CONTRIBUTING TO SANITATION DEVELOPMENT	46
4.5.1 Donors.....	46
4.5.2 Non-governmental Organisations	47
4.5.3 International partners.....	48
5 THE VIEWS OF THE ACTORS.....	50
5.1 ABOUT THE INTERVIEWS	50
5.2 “THE BIGGEST PROBLEM WE HAVE IS GOVERNANCE”	52
5.2.1 Political will – “Here in Zambia, completely different mindset”	52
5.2.2 “Decentralisation is a mess”	53
5.2.3 “The one who has the money has the power”	55
5.2.4 The policy on sanitation – “There is none”	57

5.2.5	Water vs. sanitation	59
5.2.6	What is adequate sanitation?	60
5.3	INSTITUTIONAL CONSTRAINTS	62
5.3.1	“No one is responsible”	63
5.3.2	“There is a lot of grey areas where the implementation is not very clear”	66
5.3.3	“They simply don’t have the capacity”	68
5.3.4	“Schools are a platform for change”	69
5.3.5	“It is about ownership and sustainability and use”	71
5.3.6	“We have to understand that partnership needs partnership”	73
5.4	FINANCIAL CONSTRAINTS	76
5.5	TECHNICAL CHALLENGES	79
6	KEEPING UP WITH THE CHANGE.....	82
6.1	PROBLEMS WITH GOVERNANCE	82
6.1.1	Further on decentralisation	83
6.1.2	More observations on governance.....	86
6.2	DEVELOPMENT AID AS A SOLUTION	88
6.3	COOPERATION BETWEEN ACTORS	91
6.4	POTENTIAL SOLUTIONS	92
6.4.1	National Authorities	93
6.4.2	Implementers.....	95
6.4.3	International Actors.....	96
6.4.4	Communities	97
7	CONCLUSIONS	99
8	REFERENCES.....	102
	ELECTRONIC REFERENCES.....	106
	INTERVIEWS	106

Tables

TABLE 1: THE LINK BETWEEN SANITATION AND INFANT MORTALITY, SEI STOCKHOLM ENVIRONMENT INSTITUTE (2005).	19
TABLE 2: SANITATION COVERAGE IN ZAMBIA 1990-2006. WHO/UNICEF JMP 2008.....	24
TABLE 3: DISEASE BURDEN OF ZAMBIA. WATERAID 2008.	25
TABLE 4: AID SPREAD OUT ON DIFFERENT DISEASES. WATERAID 2008.	25
TABLE 5: INTERVIEWED ORGANISATIONS IN GROUPS.....	50

Pictures

PICTURE 1: THE MAP OF ZAMBIA. ZAMBIATOURISM.COM.	4
---	---

List of acronyms

CBTS	Community Based Total Sanitation
CLTS	Community Led Total Sanitation
CPRWSSP	Central Province Rural Water Supply and Sanitation Project
CU	Commercial Utility
DAPP	Development Aid from People to People
DTF	Devolution Trust Fund
ECZ	Environmental Council of Zambia
FNDP	Fifth National Development Plan
GDTF	Global Dry Toilet Association of Finland
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit GmbH
JASZ	Joint Assistance Strategy Zambia
JMP	Joint Monitoring Programme
LA	Local Authorities
LWSC	Lusaka Water and Sewage Company
MACO	Ministry of Agriculture and Cooperatives
MCDSS	Ministry of Community Development and Social Services
MDG	Millennium Development Goal
MEWD	Ministry of Energy and Water Development
MoE	Ministry of Education
MoFNP	Ministry of Finance and National Planning
MoH	Ministry of Health
MLGH	Ministry of Local Government and Housing
MTENR	Ministry of Tourism, Environment and Natural Resources
NGO	Non Governmental Organisation
NSWG	National Sanitation Working Group
NWASCO	National Water Supply and Sanitation Council
NRWSSP	National Rural Water Supply and Sanitation Programme
NUWSSP	National Urban Water Supply and Sanitation Programme
OECD/DAC	Organisation for Economic Cooperation and Development/ Development Assistance Committee
PRSP	Poverty Reduction Strategy Paper
UN	United Nations
UNICEF	United Nations International Children's Education Fund??
WASAZA	Water and Sanitation Associations of Zambia
WHO	World Health Organisation
WSP	Water and Sanitation Programme of World Bank

FOREWORD

Some years back I visited a conference on dry toilets in Tampere, Finland. Around the same time, UNDP published its report on poverty, water and hygiene (UNDP 2006). It was then when I came to see the importance of adequate sanitation. At the same time I was astonished by the fact that a threat as big as sanitation, which causes the deaths of millions of people annually is mainly overlooked by development aid. I also realised that there is not a country in the world where sanitation policies are well thought through: everyone has something to improve.

It was after this realisation that I turned to look at developing countries. If most of the countries have something to improve and the developing countries are the ones with the least permanent infrastructure, perhaps they could be the ones getting it right for the first time, without repeating the industrialised countries' mistakes. I wanted to see for myself what the situation is in developing countries.

Coincidentally, in 2008 I had the opportunity to visit Zambia with the Global Dry Toilet Association of Finland (in Finnish Käymäläseura Huussi ry.) It turned out they were interested in the same things as I was and had been working to improve sanitation in Zambia for some years already. I jumped at the opportunity and spent the summer of 2008 in Lusaka, Zambia familiarising myself with the sanitation sector: the actors, the situation, and the challenges. This research is a report based on those months spent in Zambia.

1 INTRODUCTION

Sanitation – here referring mainly to the facilities and hygiene principles and practices related to the safe collection, reuse and disposal of human excreta and domestic wastewater – is an everyday issue all over the world. Yet, there are number of people in the world who have no access to proper sanitation. Many of these people live in the Sub-Saharan Africa. In this study, I will have a closer look at the sanitation situation in Zambia.

I set out to study sanitation in Zambia when requested to do so by Global Dry Toilet Association of Finland (GDTF). The NGO has two sanitation projects in Zambia and wished to learn more of the sanitation sector of the country. The sanitation coverage is rather low in Zambia, and the different culture and methods make it an interesting country to study. As I headed to Zambia in June 2008, my main target was to learn *how to move on from pilot projects to long-term solutions*. To find an answer to this question, several other issues came up on the way.

My research questions kept on changing and the final set was completed only much later in the research process. During the interviews I conducted in ministries, NGOs, embassies and other locations I learnt of the complexity of the sanitation sector. The question, to my small surprise, was not as simple as I had expected.

Finally, my research questions found their form. They are:

- 1) How is the sanitation sector formed, which are the most important actors?
- 2) What are the main challenges the sanitation sector is facing and how is it dealing with them?
- 3) How to involve the different actors in the sector and to enhance cooperation between actors in order to facilitate long term progress of the sanitation sector?

To get started with my research, I needed to find the answer to the first question. I already had some contacts from GDTF and other contacts I got from the Finnish Embassy in Zambia. After the first interviews the snowball kept on rolling, so to speak,

and soon I had met with 13 different actors working in the sanitation sector. During the interviews, I learnt more of the actors' roles and relationships with each other.

The interviewees also told me of the state of the sanitation sector and concentrated mainly on different challenges they are facing at the moment. It turned out that there were problems with cooperation both within the government as well as between the actors involved with development aid; often it was a question of power and participation. Soon I had the main concepts to work on: the actors and the actor networks are the main concepts in this study, as the study revolves around the relationships between different actors. Also the concepts of power distribution and participation became important, as I started to get deeper into the governance and politics of the sector.

As the research questions point out, the aim of this study is to learn more of the sanitation sector in Zambia, to recognise the actors and the challenges faced by them. Although commissioned by GDTF, this research could be relevant to anyone working in the sanitation sector in Zambia. This study is not a unique one as several studies on different aspects of sanitation have been conducted and are ongoing. In Finland, some of the most relevant research is being done by CADWES research team at Technical University of Tampere. Most aspects have been covered, varying from technical questions to research on implementation and governance on water services, to name only a few (see www.cadwes.org). However, Zambia has not been studied quite as much, and this study aims to be a helping – but by no means concluding – guide to the sanitation sector in Zambia.

1.1 Zambia

The lack of sanitation is a very serious case especially in Sub-Saharan Africa. My study involves only one state in the area, Zambia.

Zambia is located in the Sub-Saharan Africa with no coastal borders. It's neighboured by Democratic Republic of the Congo, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola. The capital city is Lusaka with approximately 3

million inhabitants, which is about 18 % of the 11,7 million inhabitants of Zambia. (World Health Organisation 2006.)



Picture 1: The map of Zambia. Zambiatourism.com.

Most of the people are young, the median age being less than 17 years. This is explained mostly by AIDS, which is a big problem in this country; the prevalence of AIDS/HIV is as high as 16,1 %. The life expectancy is approximately 40 years, so most of the population is very young. Infant mortality is another major problem for public health, annually 182 children per 1000 die under age of 5. The main cause of death in Zambia is AIDS, but when concentrating on the children, the leading cause of death is different diseases causing diarrhoea. On the whole the life expectancy is lower in Zambia than on average in the whole of Africa. (World Health Organisation 2006.)

The Zambian exports consist mainly of raw material such as copper, tobacco and cotton, which are exported to China, Europe and South Africa. Some 85 % of the employed make their living in agriculture but as many as 50 % of the population are unemployed and 68 % of the people live in poverty. (Central Intelligence Agency 2007, data from 2006.) The official language of the country is English but nearly 80 indigenous languages are spoken, a few of which are officially used in administration and at

schools. The major vernaculars are Bemba, Kaonda, Lozi, Lunda, Luvale, Nyanja and Tonga. (Central Intelligence Agency 2008).

Zambia suffers from environmental problems typical to Sub-Saharan Africa. Deforestation, erosion, desertification, air pollution and acid rain are among the biggest problems. In addition, the people's health is threatened by ineffective water management and diseases spread by contaminated water. AIDS as well as diarrhoea, hepatitis A and malaria are the most serious diseases threatening humans. (Central Intelligence Agency 2007). Especially in the summer from November to April the hot and humid climate creates a good breeding ground for malaria mosquitoes.

1.2 Global Dry Toilet Association of Finland in Zambia

Global Dry Toilet Association of Finland (GDTF) has operated in Zambia since 2006. Their projects have been operating in the Copperbelt province in the village of Kaloko since 2006 and in the capital Lusaka in Madimba compound since 2008. The Madimba project has funding from the Ministry for Foreign Affairs of Finland until 2010 and the Kaloko project received further funding until 2011.

GDTF is working towards improving sanitation conditions and increasing hygiene education in the project areas. Both of the projects are conducted by taking the local culture and customs into consideration. Locally produced materials are used for building the toilets and the people are working for their own benefit. GDTF's workers merely support the construction process and take part in hygiene education. GDTF also favours ecological sanitation, hence the name Dry Toilet Association. The toilets built by GDTF support not only sanitation but also farming by producing fertiliser. More on ecological effects of sanitation in chapters 3.1 and 3.2.2.

Since 2008, GDTF has been a member of the NGO WASH Forum, which acts as a link between the different non governmental organisations working in the Zambian sanitation sector. In this way, GDTF attempts to deepen the cooperation between actors and learn more of the state of the Zambian sanitation sector. This research was commissioned by GDTF for this particular purpose.

2 DATA AND METHODS

The data collected for this research consists of both interviews and written reports. The interviews gave me deeper understanding of the actual challenges and the formations of the actor networks, while the reports and official programmes gave some insight to what the current situation is and to the official views of different actors.

As background information I studied the Zambian official programmes and reports on the sanitation sector, such as the UNDP's Human Development Report (2006) and the Fifth National Development Plan of Zambia (FNDP) (2006). These documents gave me an understanding of the current situation as well as the plans to be conducted in the future, thus offering a good basis for the interviews.

2.1 Empirical data

As already briefly mentioned in the Introduction, the main data involves the interviews of 13 different actors, 2 of which were represented by two interviewees. The interviewees were representatives of two ministries, Ministry of Local Government and Housing (MLGH) and Ministry of Health (MoH), the Embassies of Denmark and Finland, and several organisations and consultants including GTZ, WaterAid, NWASCO, COWI, UNICEF, CARE Zambia, DAPP and the Lusaka Water and Sewage Company. All the interviews were conducted during June – August 2008. The respondents are promised to remain anonymous whenever they so wished and it is to be noted that their opinions are not necessarily those of the organisation they represent. I started with only a handful of contacts but soon learnt of other important actors through the interviews. I believe to have covered most of the main actors of the sector. A graphic presentation of the actors can be found in appendix 1.

The interviews play a critical role in this research. My goal is to not only map the actors of the sanitation sector in Zambia but also to understand how the actors themselves see the situation and challenges faced by the sector. I have divided the analysis under different themes which represent the different aspects of the sanitation sector. The interviews were conducted under the same themes. Using theme interview as a research

method allows an open ground for both the interviewer and the interviewee to move on. The common themes also guarantee that all the interviews had similar content if not the structure. (Eskola & Suoranta 1998, 88.) The themes used in the interviews as well as the questions most commonly used can be found in the appendix 2.

I chose the theme interview as my method because the positions and the background of the interviewees were somewhat different. Some were experts on an area which other did not know much about. Theme interview allowed me to ask questions on the areas which were relevant for the interviewee in question and to get deeper into the matter. The meetings were often quite informal and other matters besides the research were discussed as well.

As the interviews do not always reveal everything, I backed up my material with several documents drawn by different parties. The draft of the National Urban Water Supply and Sanitation Programme (NUWSSP) which was put together by the Sanitation Working Group was very useful, not to mention the publications of the NGO WASH Forum (2008), UNICEF (Harvey & Mukosha 2008) and WaterAid (Cumming 2008). Also the official documents by the Zambian government of the national decentralisation policy (Republic of Zambia 2002) and the additional information by different ministries and organisations provided me with ample material to back up the interviews.

2.2 Theoretical concepts

As the sanitation sector is a complicated entity, I find that the most functional concepts to work with are the ones of actors and actor networks. Most of the strategies as well as challenges are based on the relationships between different actors, their actions and reactions. The concepts of actor-spaces and practices become relevant when discussing the implementation of the policies and programmes initiated.

The actor networks and the relationships between different actors are formed and affected by the concept of power distribution. Zambia is implementing the programme of decentralisation, which aims to give the districts more power over the decisions of the central government. The use and distribution of power presents itself as an

interesting conundrum when the actors have different opinions of the practical meaning of decentralisation. With the succeeded decentralisation process, also participation becomes an issue, as cooperation and involvement of different actors becomes necessary.

Behind it all, the idea of social development and integrating sanitation to all relevant policies lives strong. Functioning sanitation system is an important part of a society's development, and involving sanitation in all areas of social development is often the key force to implementation.

2.2.1 Social development and policy integration

The structure of this research is built around the idea of social development. As defined by Wiman, Voipio and Ylönen (2007), social development allows an “equal opportunity for all to benefit, contribute and participate, and become *stakeholders* in development”. In sanitation discussion a major question is whether the communities are responsible for themselves or should the government subsidise for their sanitation systems. As can be noted from this research, no concluding argument has been presented so far. However, several projects have found that public participation and functioning public-private partnerships are the key for making progress. The concept of social development does not limit the development of the social sector but people also ought to be transformed from objects into agents of change. Social aspects are to be taken into account in all sectors and all policies.

In this research, I categorise the different effects that sanitation has on people and the environment. Sanitation has some serious environmental, social and health effects, which I will discuss further in chapter 3. This paper will attempt to demonstrate how sanitation is a crucial part of everyday policymaking and should be integrated with other policies. According to Per Mickwitz (2006, 57), there are two sides to policy integration: it can either be an effective way to coordinate policies, or it may divert attention from the political goals. Mickwitz continues to emphasise that in order for policies to be integrated, the intention should “be reflected in sectoral policy strategies, as well as in the instruments through which these strategies are implemented”. Furthermore, the motive behind the integration of policy ought to be for changing the

“real world” instead of mere bureaucracy. (Mickwitz 2006, 57-58.) In chapter 6 I will elaborate the significance of policy integration in the process of improving Zambian sanitation.

Integrated sanitation requires well organised governance. Petri Juuti and Harri Mäki point out that governance, deriving from the Latin word for steering, can be compared with the traditional approach of government driving society (2007, 83). The ideal of good governance aims at participatory democracy and transparency, which are key elements also in the process of spreading one element to be covered in several policies. Also changes as decentralisation and decrease in so called top-down approach are elements covered by good governance, which is something Zambia is aiming at with its sanitation policy. I will further discuss the current situation in Zambia and its relevance to sanitation in chapter 4.

The importance of social development, good governance and policy integration notwithstanding, they are simply superficial examination elements of the subject at hand. Operating the Zambian sanitation sector requires that all these aspects to be taken into account but yet they do not explain the reasons for phenomena described in chapter 5. The need to operate on multiple policy levels and areas increases the complexity of the actor networks and power negotiations, which are to be discussed below.

2.2.2 Power distribution

The concept of power remains an important, yet secondary, aspect of this study. It is not only relevant when talking about actor networks, but also on its own, the way it changes the decision making processes and affects the relationships between actors. Power itself is not merely acquired through hierarchies and opportunities. It is an outcome of “complex struggles over authority, status, reputation and resources” (Long 2004, 30). Power creates problems which cannot be removed “by stressing the goals of participation and empowerment” (*ibid.* 32). Yet, as pointed out by Robert Chambers (2005, 207), “considering development without power and relationships is like analysing irrigation without considering water and its distribution”. In a matter such as the sanitation discussion, power relations do play a critical role. In fact, it is quite difficult to discuss issues such as decentralisation, policy development, development

aid, cooperation and participation – all aspects which will be discussed in this paper – without referring to power relations between the actors. However, power itself can merely support the question at hand, and the more interesting and significant concept is power distribution. The issues, which I referred to, have been recognised also by Tipping, Adom and Tibaijuka (2005), Lenton, Wright and Lewis (2005) as well as Elledge (2003). These authors have also included the question of power distribution in their analyses, which support my decision to do so as well.

The concept of power distribution becomes crucial when discussing the decentralisation process, currently ongoing in Zambia. Decentralising a tightly centralised use of power is a complex procedure. To decentralise sanitation facilities, it can be assumed that local conditions and needs are taken into consideration in more detail than in the centralised system. However, decentralisation is a classic example of the problems of power distribution. One dilemma represented in the practical application of decentralisation can be distinguished by seeing the difference between “the horizontal distribution of power along different realms and functional subsystems and the vertical distribution of power along different levels of government” (Voss *et al* 2007, 198). The horizontal distribution can be seen as cooperation between actors and actor networks, while the vertical distribution of power refers to interdependencies of steering activities at different levels of governance, such as policy making at the level of the national government, regional states and local municipalities (Voss *et al* 2007, 198-199). In the case of Zambia, the success of the decentralisation process reflects not only to governance but also to the conditions of poor people living in rural areas.

Power distribution, especially the horizontal distribution of power, may come to life in the form of participation. Participation can be seen both as a goal of development processes as well as a means to yielding results. It is not induced and controlled by the central government but is generated by the populace itself. Community participation does not, however, need to be enforced equally by everyone. There are those who take part in projects while others feel less enthusiastic about the project at hand. (Ndorukwigira 1998, 93). However, the levelling and reversal of power relations affect developmental practices immensely. The bottom line is to empower those who are marginalized, powerless and poor. (Chambers 2005, 114.) Participation and ownership are not limited to the communities. There is a question of participation also with NGOs,

CUs and ministries in projects initiated from above, for instance by donors or international organisations. Ownership entails first and foremost the commitment of national authorities; the support from the civil society follows not far behind (Ndorukwigira 1998, 93).

This study entails the concept of power distribution in terms of actor networks and the concrete actions of the actors. As the question of power distribution remains an important factor in actor relations, similarly participation is as important when considering the actor networks and power distribution. All of these concepts come together in the Zambian decentralisation process, for instance. The actor networks, the question of power and participation and political practices all contribute to social development of the sanitation sector.

2.2.3 The relevance of actors and networks

After mentioning some of the elements worth bearing in mind, I will concentrate on the more operational concepts relevant to this research. The concepts of actors, network and practices explain some of the key issues of the material at hand – something to be examined further in chapter 6.

The amount of actors operating in the sanitation sector is vast; national and regional authorities, commercial utilities, non governmental organisations, donor countries and several other actors are intimately involved in the development of sanitation in Zambia. In this study it is quite natural to observe the network and power relations between the different actors. It is to be remembered that when speaking of actor networks, one is immediately simplifying the complex world. The actors are linked only in certain ways and the study of networks would be extremely complex without this simplification. The main concepts to be used in this research are actor networks, actor-spaces and political practices, which are useful when examining an entire policy sector.

In this particular case, it is not merely the actors but more accurately the networks these actors form which make this case interesting. The actor networks may be reflected upon from different view points as the networks are quite different. Even this single sector which is discussed in this paper consists of more than one network of actors, and each

of these networks has their own characteristics. These networks come in all shapes and sizes: some are tighter than others while some are only temporary and not as solid as others. Networks formed around a common goal are often more stable as the actors involved may share common financial, professional or other interests. These types of networks can also be referred to as *policy communities*. (Peltola 2001, 194.) An example of a policy community in the Zambian sanitation sector is the NGO WASH Forum, which brings together the NGOs who work in sanitation projects. The NGOs all share interests; they are professionals in sanitation and are aiming at large and sustainable sanitation coverage in the country. Policy communities, such as the Forum, tend to be more unified than looser *issue networks* built around a certain issue. Actors involved in an issue network may not share an exact vision of goals and visions, and these networks struggle more often with power distribution compared to the more stable policy communities. (Peltola 2001, 194-195.) The Sanitation Working Group which was founded to redraft the national sanitation policies acts as a good example of an issue network. The actor networks form a network society, in which policymaking involves more civil society and private sector actors than the traditional top-down bureaucratic structure (Hajer & Wagenaar 2003, 8). In Zambia, the change towards a network society is detectable yet not complete.

The sanitation sector, as well as the entire Zambian system of government, is experiencing changes which lead to new ways and spaces of policymaking. According to Hajer & Wagenaar (2003, 9), new spaces of politics exist in a void, where there are no rules as to who is responsible or who has power over whom. It becomes a struggle of power and a question of trust between the actors within the network. This leads to a situation, where policymaking is not simply about finding solutions but more so about “finding formats that generate trust among mutually interdependent actors”. (*Ibid.* 9-12.) The newly forming network society in Zambia is a result of the increasing effort in good governance and thus it is interesting to see how the networks react in the formation of a new sanitation policy.

The question of power relations can be viewed in the light of actor-spaces. Maria Åkerman (2006, 16) speaks of actor-space as the network, which determines the relationships between actors as well as the position of a single actor at a certain moment in question. Jonathan Murdoch and Terry Marsden (1995, 369) refer to actor-spaces

which emphasise “the spatial constitution of resources which both enable and constrain action”. As the Zambian sanitation sector is both ideologically and spatially widely spread, it is important to determine how the actors are connected and how do the non-local actors effect the change and control over a distance (Murdoch & Marsden 1995, 372). Actor-spaces are linked to political practices, as the formation of the practices has an effect on the position of the actors in question (Åkerman 2006, 15). However, practice is more than simply a synonym of action. It integrates the actor with all the values, beliefs and resources in one activity system. Practice also suggests that an actor is aware of the actor network in question and knows his or her position in it. Therefore, the practice theory contains more than the traditional actor-structure dichotomy by reminding us of the complexity of the relations between the two. (Hajer & Wagenaar 2003, 20). The study of political practices thusly offers a viewpoint to the actor network analysis also in terms of power relations.

In this research, the study of political practices in the policymaking within the actor network is a gratifying point of view. As the sanitation sector changes with society and becomes more connected with other sectors and policy areas, also the actor networks become more complicated. Studying practices also shows that the actions of the actors are affected by their motives and political situation within the network. The fact that differences in policymaking can often be traced back to conflicts raised by differences in resources of money and power (Hajer & Wagenaar 2003, 21) makes the analysis of the Zambian sanitation sector an intriguing one.

2.2.4 Actors in policy management

In this study, actors meet in situations where their intentions, motives and strengths collide. Varying fields of action need to be organised in order to proceed with the analysis of the different possibilities of courses of action. It may even occur that when two separate actor networks and spaces come together under one new possibility, a completely new action space has been created. Again, the rules and relations are subject to change, and new options can be added to the discussion. (Peltola 2007, 59.)

This change in action space causes change both in institutional as well as personal relationships. The networks of actors renew themselves and power may be distributed in a new fashion between actors. The changes reinforce one another, and may move together in the same direction, as Chambers (2005, 211-212) suggests, “towards hierarchy, control and standardization, or towards participation, empowerment and diversity”. The hierarchical structures will change: if an important actor is to reorient towards learning and responsiveness, so, too, must those who work with them. These power relations allow more room to move, when the more powerful ones transform their attitudes from dominators to enablers. Otherwise change within power relations is difficult to achieve without the intervention of another, more powerful actor. (Chambers 2005, 207-212.)

The changes also affect policy management and decision making. Within a hierarchical system, decision making and implementation are separate functions. As a result, the practices through which the policy is manifested are often determined by some other actor than the governing body. Actors themselves are not bound to a limited field of action but their possibilities are determined by the change in the actor-space and power relations. This “resonance of possibilities” creates not only new practices but more participation in politics by envisioning new ways to define the problems and issues that are to be dealt with. By examining the political practices, the fragility of power structures can be determined. It can be found that by concentrating on one particular goal, several new possibilities may be opened up on the way. (Peltola 2007, 55; 60-61.) Unanimous actor groups may therefore offer by-standing groups new possibilities even with strict horizontal power relations (Voss *et al.* 2007, 198).

However, the new possibilities do offer, or require, continuous redefinition of goals and procedures. Actors are connected to the policy development by different roles and practices, and their position is defined by the place they are holding in the power structure. Emphasis is piled over practices rather than institutional structures and governance. (Peltola 2007, 63.) The study of practices allows some insight to the different possibilities that the case at hand is presenting, while at the same time it is crucial to examine the level of congruence between actors in questions such as decentralisation, participation and democracy (Chambers 2005, 199). In a question of a development process such a complex one as the sanitation issue in Zambia, several

issues are to be taken into consideration when analysing the situation. In this research, the main points of view to be considered are actor relationships in terms of policy making and development in sanitation sector, as well as the effect of power distribution and practices to these relationships.

3 SANITATION – THE KEY ELEMENTS

Sanitation as a term covers, among other things:

- safe collection, storage, treatment, and disposal, reuse or recycling of human excreta
- drainage and disposal of household wastewater
- management of solid wastes
- drainage of storm water
- treatment and disposal of sewage effluents
- management of industrial waste products and hazardous waste

(Lenton *et al.* 2005, 30.)

This research concentrates on the first two items of the list, as does Target 10 of the Millennium Development Goals (Lenton *et al.* 2005, 30). Sanitation as management of human and household waste is one of the key dilemmas in the world today. Often sanitation comes up with strategies linked to water supply, and in this research water supply and sanitation policies are mentioned frequently. In practice, it is difficult to separate the two. Also latrine facilities, sewage systems and improved hygiene as well as education are an important aspect of this study.

Clean water is a necessity for us all. Even despite of this approximately 1.1 billion people have no access to clean water and as many as 2.6 billion people, which is nearly half of the people living in developing countries, are lacking basic sanitation. The lack of sanitation is a global problem but in this research I will concentrate on the situation in Sub-Saharan Africa, mainly in Zambia. Especially in the rural areas only approximately quarter or the people have proper sanitation facilities (JMP 2008). The figures are alarming as the lack of sanitation and clean water is one of the biggest causes of infant mortality in the third world countries causing 1.8 million children's death annually (UNDP 2006, 2-3). If the combined effect of sanitation and hygiene on diarrhoea, pneumonia and malnutrition is taken into consideration, the figure would be as high as 2.4 million (Cumming 2008, 2). Also lives of numerous children could be saved by improving sanitation alone. Every year, 9.7 million children die before their fifth birthday. According to an estimate by WHO, sanitation could reduce the number of

children who die from diarrhoea annually by approximately 910,000 (65 % of all the deaths caused by diarrhoea), children who die from pneumonia by 900,000 (50 %) and children dying from malnutrition by 560,000 deaths. The transmission of pneumonia has been linked to poor hygiene practices and malnutrition is often a consequence of diarrhoea which leads to, among other things, malabsorption of nutrients. (Cumming 2008, 5-6.)

Sanitation affects also other things than people's health – both directly and indirectly. The increase in disease affects the entire society; healthy children can attend school and adults can work. In health care the prevention of disease is at least as important as curing them, and in the long run it will be considerably cheaper (Haller et al 2007). The lacks in sanitation cause also environmental problems, which go often hand in hand with health problems. The Ministry of Health of Zambia (2008) has a definition for environmental sanitation as “process whereby people demand, effect and sustain hygiene and health environments ... by erecting barriers to prevent the transmission of disease agents”. The term goes together with environmental health which also includes aspects that might affect the health of the future generation. (Ministry of Health of Zambia 2008.) Thusly, improving sanitation aims to solve problems in different sectors, from agriculture to education and from healthcare to wastewater management. In this chapter, I will introduce the operation of the sanitation sector in general as well as tackle the main effects of sanitation. Afterwards, the emphasis will be on sanitation in Zambia and the challenges observed there.

3.1 The effects of sanitation

The term *sanitation* covers clean water, wastewater management and hygiene. The main function of a sanitation policy is to guarantee safe collection and disposal of human excreta and domestic wastewater, as well as offer facilities for such tasks. All these aspects are linked to one another; without proper waste management and human waste management, it is difficult to provide clean water or a hygienic environment.

Sanitation management is divided to several different areas. The waste collection and wastewater purification are tasks of companies working in the field. Household

sanitation is a concern for both the individual as well as the state: the ministries maintain laws and regulations which affect the sanitary conditions whilst the individuals are responsible for their own sanitation facilities. Schools and other actors offer education on hygiene and sanitary behaviour. The national government is the one which assigns the responsibilities for providing services. (Elledge 2003, 9-11.)

In the following section, I have divided the main effects of sanitation into three groups: health, social and environmental. Finally, I will discuss the problems of monitoring the goals set for sanitation.

3.1.1 Health effects

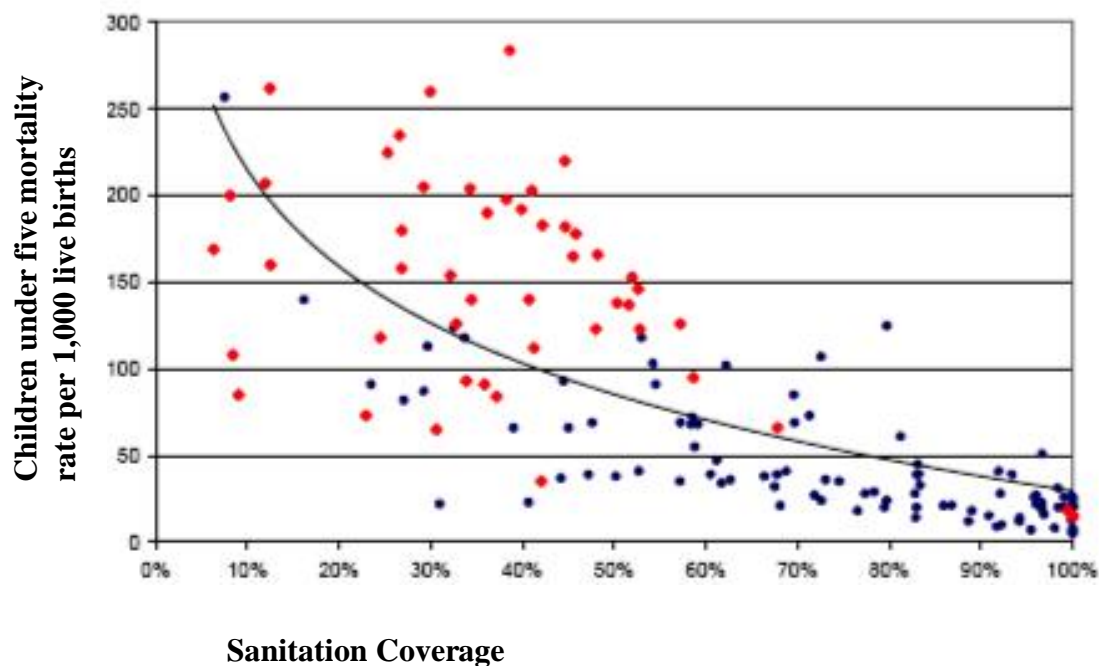
The lack of clean water increases mortality because many of the deadly diseases spread through water contaminated with human faeces. Antti Pönkä (2006, 461) lists the most remarkable microbes in wastewater: “The wastewater contains a large amount of microbes, out of which the most remarkable are bacteria, virus, microbes and eggs of parasites which cause intestinal diseases.” Many microbes stay viable even for months and can easily penetrate human “via food, water or hosts such as ... fish or domestic animals”. The most common bacterium is *Vibrio cholerae*, which is the main cause of diarrhoea especially in the countries in Sub-Saharan Africa. The viruses causing diarrhoea are rotavirus and norovirus which spread through contaminated water. There is, however, not enough information on the spreading of viral diseases, excluding hepatitis A, and it is difficult to be certain of how large part the contaminated water is playing in spreading of disease. Usually viruses spread by airborne transmission or by contact depending on the type. A big problem is created also by different microbes, which are spread in excreta contamination and which cause intestinal infections. (Pönkä 2006, 247-252.) The diarrhoea and intestinal diseases can often be deadly especially for children and infants due to lack of clean – or any – water to restore the hydration balance.

UNDP has defined the minimum need for clean water 20 litres per day per person. Most of the 1.1 billion people in the world, who have no clean water, use only 5 litres of water daily. To put this in perspective, it can be stated that a European uses over 200 litres of water daily and an American as much as over 400 litres. If a human does not

get enough clean water, the risk of contagion increases notably. In 2004 60 million people died in the world. Out of these 10.6 million, nearly 20 %, were infants under the age of 5. Even though the infant mortality is only around one per cent in the developed countries, it counts as much as the third of deaths in the Sub-Saharan Africa. (UNDP 2006, 5.)

The infant mortality and the lack of sanitation go hand in hand (see table 1). The water contaminated by human faeces causes 5 billion cases of diarrhoea in children of developing countries annually. Of these cases 1.8 million children die, 90 % being under 5 years of age. The diarrhoeal diseases are the second biggest cause of infant mortality after acute respiratory infection. Worldwide diarrhoea kills more than tuberculosis or malaria – even five times more children die of diarrhoea than AIDS. The seriousness of diarrhoea is increased also by *Shigella dysenteriae*, which causes dysentery and is cured only by antibiotics instead of the traditional oral rehydration salt. (UNDP 2006, 42-43.) However, it is difficult to get medications, or even clean water to restore the hydration balance. According to UNDP, using water closet or other hygienic sanitation facilities decreases the risk of diarrhoea 20 %, meanwhile the access to clean water reduces the risk for 70 %.

Table 1: The link between sanitation and infant mortality, SEI Stockholm Environment Institute (2005).



3.1.2 Social effects

In addition to education, environment and agriculture, the well thought out sanitation benefits also the social aspects of society. Healthcare is no longer only for the wealthy when the society concentrates on the level of primary healthcare – disease prevention. To give access to clean water and sanitation for poor communities as well costs eventually less than restoring the hydration balance with medical oral rehydration therapy (ORT) or immunisation to the most common diseases. Even though the possibilities of restoring hydration balance have increased, ORT is useful only for curing the acute and temporary diarrhoea, when most of the infant mortality is caused by long term diarrhoea not healed by ORT. (Hardoy, Cairncross & Satterthwaite 1990, 23.) The improved sanitation reduces social inequity by improving the health of the poor population.

Mel Bartley discusses the concept of social ecology in his work *Health Inequality. An Introduction to Theories, Concepts and Methods* (2004, 116-122) from the public health point of view. According to Bartley several things affect health; not only concrete factors but also the psycho-social aspects. Statistically it appears as though the wealthier people are usually also healthier than average and employed are healthier than the unemployed. However, Bartley reminds us of relativity; wealthiness can be exponential but only a few live to be over 110 years old. Social factors have their limit, too. In addition relativity shows also in socio-cultural matters; money is not always everything but one can be also “wealthier”, and thus healthier, if he has a better car than his neighbour – or sanitation facilities at his home. Even though health effects have traditionally been the most important incentive to improve sanitation, lately has been noticed that health and hygienic reasons are not motivative enough to spend money on a new toilet. According to the research by the sanitation programme of World Bank increased comfortability, privacy and safety as well as social status are among other things more motivating reasons than simply health matters to invest on sanitation. (International Hydrological Programme 2006, 84.) According to social ecology the improvement of social conditions would benefit health as much as any concrete actions. Building toilets would serve not only the concrete health goals but also the psycho-social and socio-cultural needs of the population, which also are beneficial for health – notwithstanding mental health.

3.1.3 Environmental effects

According to Juuti and Mäki (2007, 5), the lack of adequate sanitation acts as an environmental determinant of poverty. Comparable to air quality or natural disasters sanitation affects the rural and urban livelihoods and health, as well as causing vulnerability to environmental change, which are all dimensions of poverty. The most apparent effect is to the livelihoods of the people, as poor sanitation causes problems in land cultivation and gardening, not to mention in the acquisition of clean drinking water.

By providing societies with adequate sanitation, it is possible to avoid severe environmental problems. Leaving the human waste untreated, especially in urban areas, causes a number of water problems, such as deterioration of lakes, reservoirs, and rivers near cities. Furthermore, modernization of agricultural practices brings about heavy use and run-off of nitrogen and phosphorus from chemical fertilizers, causing eutrophication of waters near the cities. Overflowing sanitary systems and untreated sewage are some of the main causes of eutrophication, which often leads to decrease in fish and shellfish population and increase in the biomass of different plankton and algae, leading to decrease in biodiversity. Fundamental to a solution is the treatment and disposal of human wastes. Recovering urine and reusing it in agriculture is particularly important to solving the problem of the Earth's limited water resources. (Melack 2001.)

Sanitation alone cannot solve the pollution problems, but it can make it easier to find an ecologically sound solution to wastewater problems. In all, the ecological sanitation approach (see chapter 3.2.2) gives opportunities to more ecologically sound and more cost-moderate solutions, when used in a suitable combination with the other presented possibilities. (Melack 2001.) When the toilet waste is handled properly, the water will remain unpolluted and thus clean to drink. This, in turn, saves the resources in wastewater management. The toilet waste can be used also to save energy; it can be used for heating and cooking, which saves about 20 % of the energy used in cooking food (Bracken 2005, Water Resources Protection Workshop, Eritrea).

Composted manure may be used as fertiliser on fields, which reduces the use of the expensive artificial fertilisers and thus returns the nutrients back to nature. Urine can be

used for irrigation of the plants to save the precious clean water. Much research has been done to determine the safety of toilet waste as fertiliser and it has been found that properly treated waste has no more adverse effects on the grown food than the artificial fertilisers – maybe even much less. Especially urine is practically sterile and works as excellent fertiliser after some months. (Austin 2004, 1st International Workshop on Ecological Sanitation, Zambia.) Quite the contrary, the poor soil grows bigger plants when the fertiliser used is of a natural source. Even though the use of human waste as fertiliser may be a potential health risk, bring the increased nutrition and wellbeing more benefits than the possible risk. (Bracken 2005, Water Resources Protection Workshop, Eritrea.) Ecological sanitation will be elaborated further in chapter 3.2.2.

3.1.4 Measuring goals in sanitation

As in every sector, several goals for achieving adequate sanitation have been set. However, it has proven difficult to measure these goals accurately. For making monitoring and evaluation easier, WHO and UNICEF joined their efforts in monitoring the water supply and sanitation sector through the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation. The purpose of this programme was to monitor sector progress and programs and build national sector building capacity. The coverage estimates provided by the JMP come from user-based data derived from nationally representative household surveys and censuses. The surveys used in the calculation for correct data must meet certain criteria: the coverage estimates are based on the type of services used, so a survey clarifying whether or not people have *access* to sanitation is not enough for accurate calculations. Often data in surveys and censuses are presented with insufficient detail, and therefore alternative methods must be used. These include coverage data given through the Global Water Supply and Sanitation Assessment 2000 questionnaire sent to WHO country representatives, to be completed in liaison with local UNICEF staff and national agencies involved in the sector. (Lenton *et al.* 2005, 33.)

The definitions for adequate sanitation differ greatly. In this paper, as well as in most of the documents cited here, the definition by JMP is used. The terminology includes *basic* and *improved* sanitation. Basic sanitation describes public or shared latrine, open pit or bucket latrines. Basic sanitation is defined as “access to safe, hygienic and convenient

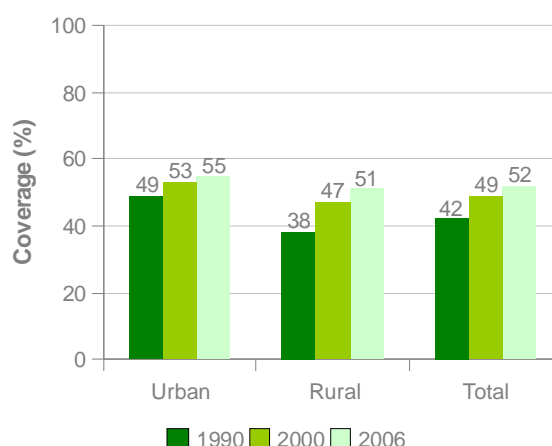
facilities and services for excreta and sullage [household wastewater] disposal that provide privacy and dignity ... ensuring a clean and healthful living environment". (Lenton *et al.* 2005, 30.) Improved sanitation, on the other hand, includes a connection to a public sewer or a septic system, pour-flush latrine or a simple pit or VIP latrine.

Basic sanitation should thusly contribute to impacts on public health and environmental pollution by creating safer home and neighbouring environment. Obviously, rural and urban facilities differ a great deal; what may be sufficient for a single rural household would no longer qualify as proper access in an urban slum area. In order to keep track of adequate sanitation, it is important to create measurable indicators to follow up the situation on national and international levels. Issues, such as sanitation facilities divided by gender would contribute to the effect sanitation has on a social level. However, determining which indicators are to be used for measuring adequate sanitation is so far an ever-changing process; there is a need to create a balance between what is desirable to measure and what is possible. (Lenton *et al.* 2005, 31.)

3.2 Sanitation in Zambia

In 2002, 68 % of the urban population in Zambia had access to proper sanitation facilities. However, the rural equivalent was only 32 %. Of the urban population 90 % had access to clean drinking water, when in the rural areas the percentage was 36. (World Health Organization 2006.) These figures seem good when they are compared to the data from Zambian authorities in 2000: then the sanitation facilities covered only 41 % of the urban population and as little as 13 % in rural areas (Ministry of Health of Zambia 2008). Furthermore, it is stated in the Poverty Reduction Strategy Paper of Zambia that the actual figures are considerably lower due to poorly maintained sanitation facilities (Republic of Zambia 2006, 183). The difference in figures is due to inaccurate definitions used in the sanitation sector. The Zambian government considers only ventilated pit latrines and flush toilets (introduced briefly in chapter 3.2.1) as improved sanitation, whereas the WHO/UNICEF Joint Monitoring Programme (JMP) includes also pit latrine with a slab and composting toilet (Cumming 2008, 1). According to UNICEF, the most exact numbers are found in the JMP, which I will use in this paper as well (see table 2).

Table 2: Sanitation coverage in Zambia 1990-2006. WHO/UNICEF JMP 2008.



Zambia uses approximately 0,5 % of its GDP to water management and of the state budget 0,6 % is reserved for sanitation between the years 2006 and 2010. In 2006, only 0,2 % of the budget was used to improve sanitation. Overall, Zambia spends in 2006-2010 300 million US \$, i.e. 3,1 % of the entire budget of the five year development plan. Most of this is invested on the development of rural sanitation and creating a permanent infrastructure. (Republic of Zambia 2006, 194.)

The improvement of sanitation has been extremely slow. Zambia itself recognises the mistakes it has made in the plans in the PRSP (Republic of Zambia 2006, 184): there were several programmes in the country to improve sanitation but they were not properly coordinated, which led to the inefficient use of the resources in the sector. In addition insufficient funding from the state and the lack of coordination made it more difficult to both realise and evaluate the programmes; put simply, much is up to political will. Some key policy and institutional reforms intended to improve sanitation include “separation of water resources management from water supply and sanitation, devolution of authority from central government to local authorities and private enterprises, human resources development leading to more effective institutions and the use of more appropriate technologies for local conditions” (Republic of Zambia 2006, 185). These goals are mentioned often, but as can be deduced from the comments in chapter 5, the implementation of these processes is all but complete.

The situation is not improved by the fact that the support from the government and many donors as well as NGOs is only a fraction of the aid given to the water sector. The

table 3 indicates the disease burden of Zambia. However, the table 4 shows how most of the aid is given to fight HIV/AIDS while other diseases and sanitation share a considerably smaller portion of the aid. According to WaterAid, only 11,6 % of the aid on Water and Sanitation is directed to sanitation. (Cumming 2008.) To compare the aid given to water and sanitation, water supply development earns up to 90 % of the aid while sanitation is left with hardly 10 % (WaterAid2 1st July 2008). To sum up, sanitation is a big problem in Zambia, but for some reason the aid is not directed accordingly.

Table 3: Disease Burden of Zambia. WaterAid 2008.

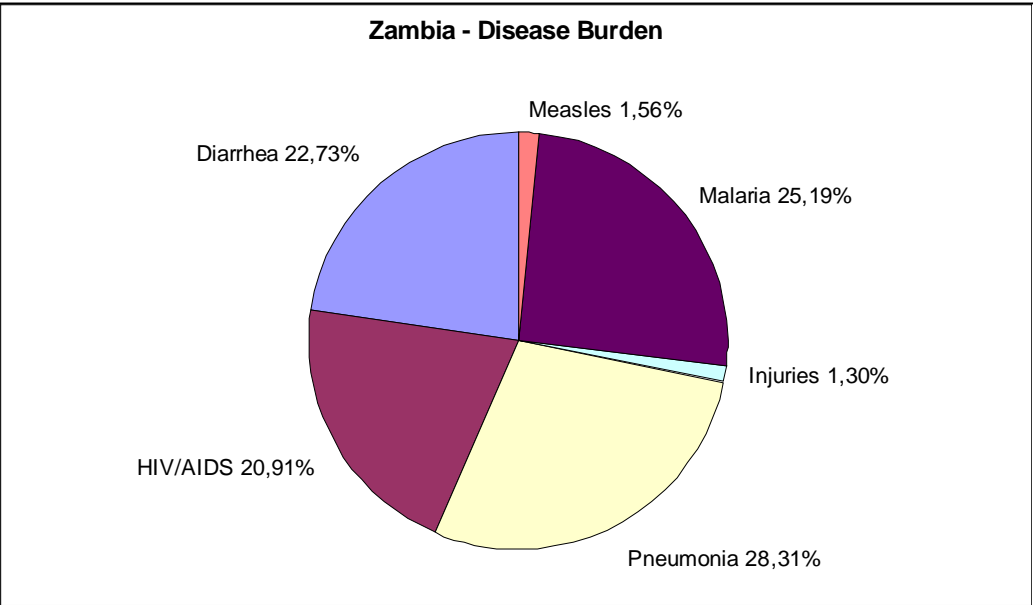
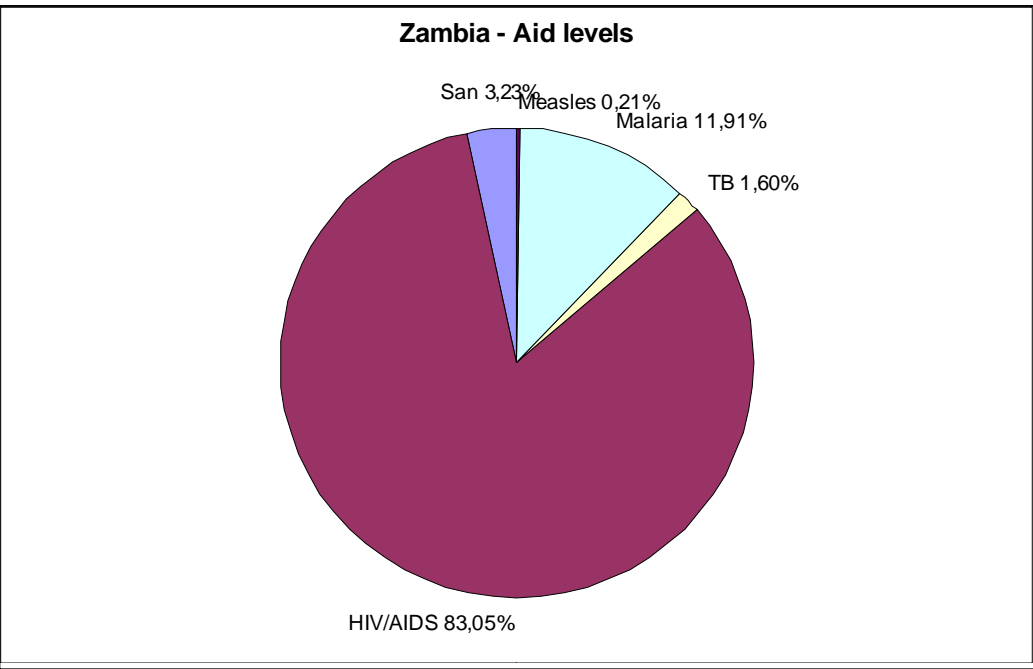


Table 4: Aid spread out on different diseases. WaterAid 2008.



As for the social structure in Zambia, the housing can be divided in to four groups, all of which have different level of sanitation. High- and medium-cost housing areas are in the urban areas and account for big and medium sized houses with internal bathrooms, not necessarily connected to the sewage system but have septic tanks instead. Low-cost housing includes external taps and in these areas sewage is neglected. The fourth group is peri-urban areas, where houses are built unplanned and where water and soil contamination is frequent. (COWI 4th July 2008.) In the poorer areas where there is no or poor sewage system, people are more in contact with their excreta. The poorer areas are more likely have a garden, where they grow their food, and sometimes sludge mixed with soil is often used as fertiliser, although this does not reduce the possibility of contamination. Because of cultural reasons, these practises are not spoken of. (NWASCO1 17th June 2008.)

3.2.1 Sanitation technology

The sanitation technology develops constantly but the recent achievements rarely end up to the use of the poor people in Sub-Saharan Africa. Because the traditional water closet is nearly impossible to be used in many developing countries due to poor infrastructure and lack of water as well as the poor wastewater management (International Hydrological Programme 2006, 4-5), many alternative options have been developed. I will shortly introduce a few most common toilet types but it must be noted that there are options galore and many people are forced to use the more primitive solutions, such as the plastic bag which also known as “the flying toilet”.

A rather common and cost-effective solution is to build a pit latrine, which is very common in Zambia as well. To make one, a deep hole is dug and it is being used until it is full. After that the hole is covered and a new one is dug next to it. While the one hole is being used, the waste in the other one is slowly degrading. Because the simple pit latrine does not separate the fluids from the excreta, the degrading process is very slow. This creates a breeding ground for flies and larvae of mosquitoes and causes unpleasant odours.

A more modern alternative from the traditional pit latrine is the so called VIP (Ventilated Improved Pit). This facility is rather odourless because the pit is ventilated

with a pipe directing the odours elsewhere. The pipe is equipped with a net, so the insects will not get out of the hole. Also VIP can be used with two holes, when it is easier to empty the holes when the contents of it have been degraded. (Sinnatamby 1990, 132–138.) A VIP type of latrine, a pour-flush latrine is good for areas where water is not scarce; a pour-flush latrine uses up to 2 litres of water per use. (Huuhtanen & Laukkanen 2006, 28.) The problem caused by pit latrines is that if the hole is very deep or the ground water runs very close to the surface, the groundwater may become contaminated by the waste. The pit latrines may in this way increase the nitrate levels in the water and spread several diseases. (International Hydrological Programme 2006, 6.)

At urban households, one common type of sanitation facility is the septic tank, where water transports the wastes to the bottom of the tank to an anaerobic environment. The extra fluids are usually removed by sewer; however, often the tank is not even connected to the sewage system. The tank is not cheap, which is why many tanks are shared by two or more families. (Sinnatamby 1990, 143.) The septic tank presents other problems as well. For instance, the emptying is often neglected which cause the fluids to remain untreated.

For the dry Africa an excellent option is a dry toilet separating urine from excreta. This makes the degrading process much faster and both the composted manure as well as the separated urine can be used as fertiliser on the fields. The problem presented in this option is the separation of urine: if the separation process is unsuccessful and too much fluid is let into the compost, the waste is not composted as planned. There also must be proper storage facilities for the urine. (Sinnatamby 1990, 132–138.) However, the dry toilet technology has developed greatly. Correctly built and planned dry toilet takes care of the hygienic sanitation as well as offers natural fertiliser to gardens and farms. Dry toilet has been a front runner of ecological sanitation. (Huuhtanen & Laukkanen 2006.)

3.2.2 Ecological sanitation

Ecological sanitation – ecosan for short – is a concept developed to achieve the millennium development goals in sanitation sector. Ecosan does not favour any particular sanitation technology, but concentrates on principles which human waste management should follow. The solution was defined by a group of experts in February

2000 in Bellagio, Italy. The group prepared the so called Bellagio principles as a basis for the new paradigm of ecological sanitation. The principles list the basic idea of ecosan:

1. Human dignity, quality of life and environmental security at household level should be at the centre of the new approach, which should be responsive and accountable to needs and demands in the local and national setting.
2. In line with good governance principles, decision making should involve participation of all stakeholders, especially the consumers and providers of services
3. Waste should be considered a resource, and its management should be holistic and form part of integrated water resources, nutrient flow and sanitation
4. The domain in which environmental sanitation problems are resolved should be kept to the minimum practical size (household, community, town, district, catchment, city) and wastes diluted as little as possible
(International Hydrological Programme 2006, 11.)

The main principles of ecosan involve proper treatment of wastewater and recycling whenever possible, returning the nutrients back to nature and balance between community development and environment. The NGOs working to improve sanitation often try to concentrate on ecosan solutions because the ecological principle supports also the solutions to the other problems of the developing countries, including health, recycling and reuse of wastes (Fenger 2006, 99-100).

In Zambia, ecosan is part of several development projects but has not become a popular trend as of yet. Human excreta are often used as fertiliser but this method is rarely spoken of. Yet, in a country where urban sewage and water treatment are in poor condition ecological sanitation can be seen as a viable alternative, especially in households and communities with gardens. This paper will return to the issues dealing with ecosan in the upcoming chapters.

4 THE DEVELOPMENT OF THE SANITATION SECTOR IN ZAMBIA

This chapter will introduce the state of the sanitation sector in Zambia in greater detail. Before discussing the matters of development aid by donors and NGOs, I will concentrate on the Zambian system of government. As Zambia is a developing country and an old colony of Great Britain, the governance in Zambia has some specific qualities. In this chapter, I will briefly introduce the system of government of the country and introduce the actors involved in the government. I will also discuss briefly the strategies and policies developed around sanitation.

4.1 On recent political development in Zambia

Since its independence in 1964, Zambia has been a republic, ruled by the president and the government. The government consists of 22 cabinet ministers, who are in charge of their ministries respectively. (State House 2008.) The country itself is divided into nine provinces, which again have several districts in them. The districts are governed by the city councils. The land is also divided into different areas which are governed by tribal chiefs. The government provides services such as education, health, water supply, but the chiefs are in charge of the land and the people in the traditional sense. (Republic of Zambia 2002, 8-9; NWASCO1 17th June 2008.)

Zambia could be referred to as neopatrimonial society where the head of state and the biggest government party share power. Many decisions, even very detailed ones, go through ministers or even the president, which causes things to develop very slowly. Hierarchy is still a problem within the country, although the situation is not as bad in Zambia as in many other Southern African countries. (Antila 4th August 2008.)

The government has taken increasingly more ownership over the projects supported by donor countries and is determined to reach the Vision 2030, which would mean to turn Zambia into a middle-income country by the year 2030. This official vision is supported by several goals reviewed in poverty reduction strategy papers and follow ups, but the implementation seems to be the key issue which should be paid the attention. The

ministries are well aware of their own areas of expertise and projects within ministries are advancing. However, even though the ministries operate well, the poor communication between ministries is causing problems in projects involving several ministries – such as the sanitation issue. (Antila 4th August 2008.)

The Zambian government has paid great attention to promoting good governance. Zambia is a functioning democracy and the elections of 2006 were successfully organised. The biggest problem is corruption, which is fought strongly by the government. Transparency is being enforced by public trials for those caught in corruption. (Antila 4th August 2008.)

One example of the work on good governance is promotion of decentralisation, which has been on going since 2002. When successful, decentralisation would give more responsibility to the local authorities, especially concerning implementation of projects. This has, however, not been accomplished quite as planned. The government still finds it difficult to let go the projects after the planning stage and wishes to be in charge in the implementation stage as well. This results in poor resource management as the funds as well as the personnel are being allocated inefficiently. (COWI 4th July 2008.) There is a lack of political will to implement the decentralisation programme efficiently, but also political parties create problems: the governing parties find it difficult to hand over power to the areas under opposition (Antila 4th August 2008).

4.1.1 Decentralisation

The National Decentralisation Policy was launched in 2004. The goal of decentralisation was to move the responsibilities from the government to the local authorities. The vision of the government is "to achieve a fully decentralised and democratically elected system of governance characterised by open, predictable and transparent policy making and implementation processes, effective community participation in decision-making, development and administration of their local affairs while maintaining sufficient linkage between the centre and the periphery" (Republic of Zambia 2002, 18).

Decentralisation can take four different forms. *Deconcentration* is the transfer of functions and resources to lower level units of the same administrative system, while the decision-making authority remains in the centre. *Devolution* is the transfer of some powers and authority, functions and resources to lower levels, institutionalised by constitutional means. *Delegation* is the transfer of functions and resources to a subordinate authority with the capacity to act in the behalf of the superior authority without a formal transfer. *Privatisation* is the divestiture of state interests in public enterprises and the sale of such to the private sector. However, this cannot be applied in the case of public administration as public offices cannot be privatised. (Republic of Zambia 2002, iii-iv.)

The policy followed in Zambia is clear: “Decentralisation, if properly implemented can lead to efficient and effective delivery of services. Decentralisation through devolution would be most effective as it ensures technical efficiency and effectiveness in service delivery and enhances popular participation.” (Republic of Zambia 2002, 6.) The benefits expected from the devolved system of decentralisation are as follows: political stability, lower level participation, enhanced accountability, improved responsiveness of government, tailor-made locally specified plans and increased motivation of field level personnel (Republic of Zambia 2002, 7). These aspects are all included in the definition of good governance and thus supported by the international development aid.

Decentralisation is to improve the efficiency with which the resources are being directed towards the sanitation sector. In terms of sanitation, decentralisation should develop the structure of the sector, share the work load more equally and, most importantly, allow the districts tackle their own problems instead of the central government applying the same policy in different conditions. Decentralisation is supposed to develop participatory governance system and make capacity development and aid coordination easier. (Republic of Zambia 2002, 6-7). When these issues are addressed, sanitation sector is more likely to operate in a more harmonised way.

4.1.2 Civil society

The churches, NGOs, CBOs, professional association – they all contribute to the well being of society and together constitute the framework which protects the stability of

the society (Johnston 1998, 46). In this case mainly the NGOs, both Zambian and foreign ones, are vital for the development of sanitation sector in Zambia. The NGOs appear to be viewed by local people “as protectors and advocates whereas the government appears to view them as a development platform for activities which they would like to see carried out but either will not or cannot finance them from their own resources” (Taylor 1992, 254). The growing number of attempts to follow the principles of good governance has created an improved environment for the Zambian NGOs to work in. Even if the power in decision-making is much in the hands of the governing party and the president, the NGOs are being included increasingly. The representatives of various NGOs take part in the working groups working on the sanitation policies and are being consulted by the government in drafting of legal documents and regulations. The civil society has much to offer in the improvement of Zambia, after all, the active members of various organisations are often the change agents needed to facilitate change in society. The critical question, according to Patrick Molutsi (1999, 183), concerns the role of civil society in the current political discourse. Without the pressure by NGOs, continues Molutsi, “it is doubtful whether change would have occurred at all”. A functioning civil society is crucial in motivating the communities in improving their living conditions. Community based and -led projects on sanitation have received not only positive feedback but also some noticeable results. More detailed information about these projects can be found in chapter 4.2.3).

4.2 Sanitation and governance

As mentioned earlier, one of the problems with sanitation is that sanitation development is nearly always put together with water supply development, and then often left with less attention. Zambia does have a sanitation programme, but it is usually put under the heading Water and sanitation, where sanitation is discussed only briefly. As the Councillor Development of Danish Embassy put it, there is a programme but it is full of potholes (Danish Embassy 26th June 2008). In 2008, a National Sanitation Working Group (NSWG) consisting of government representatives, donors as well as NGOs working in the sanitation sector has been working on a new national sanitation programme. This programme, the National Urban Water Supply and Sanitation Programme (NUWSSP), concentrates as the name suggests mainly on urban sanitation.

The preparation of the National Rural Water Supply and Sanitation Programme (NRWSSP) is also ongoing. Both of these programmes ought to be launched by the beginning of 2009.

The programmes are made separately because the conditions in rural and urban areas are so different that a number of solutions are required. The lack of sanitation is not seen as a serious problem within the rural settlements, where the population density is low and there is, and always has been, a lot of bush around to go and do one's business. It is difficult to get the locals invest on sanitation when they see several other more important areas of investment. Overall, according to many experts, sanitation does not present as big a health risk in the low density rural areas. For these rural areas, the main concern is to gain access to clean water. Pumps, boreholes and wells are a better target of investment than a toilet, when asked from the experts. Also hygiene education would be useful: people know clean water is important, but they may not know how to keep things hygienic. (COWI 4th July 2008; NWASCO2 17th June 2008.)

However, the more highly populated areas in the peri-urban areas require more attention in the sanitation sector. In the low cost housing areas there is usually a very high population density and no sewage system whatsoever. Here the usual way is to dig pits for toilets behind the houses. This is by no means a good solution, because during rainy season the streets will be flooded and the contents of the pits will be floating on the streets. The contaminated water may contaminate also the source of clean water as well as spread diseases, as discussed in chapter 3.1.

In the towns the urban population is somewhat better off. Of the better houses many are not linked to sewage but use septic tanks instead. When the infrastructure of the town is being maintained or rebuilt, the government often subsidises the building costs of sewage systems and thus the urban population does not need to pay for their drainage. This might be seen somewhat unfair towards the rural or peri-urban population, who do not have any excess money to invest on sanitation if they wish to afford to send their children to school. (COWI 4th July 2008; NWASCO1 17th June 2008.)

According to a representative of NWASCO, the problem lies within the subsidisation policy. The government is keen to subsidise the towns but the rural areas are often left

out of it. Whereas the donor policy is that sanitation is a responsibility of every household and no subsidies should be paid. This means that the poor rural and peri-urban population are required to pay for their sanitation – something many of them consider secondary to their many other needs – while the wealthier urban population is rewarded by building sewage systems without any extra costs. (NWASCO1 17th June 2008.) However, according to the UNICEF representative, the donor policy is only beneficial. The UNICEF programme CLTS (Community Led Total Sanitation; see chapter 4.2.3) concentrates on giving the locals the ownership of the project, making them responsible for the change without paying any subsidies. It is the opinion of the UNICEF representative, that this approach is the most fertile and has a lot to offer in the future. (UNICEF 22nd July 2008.)

4.2.1 Sanitation policies

Even though the national policies on sanitation are full of potholes (Danish Embassy 26th June 2008), sanitation is a part of several national policies. Some attempt has been made to improve sanitation but only lately, perhaps due to the pressure of the MDGs, there have been more investments on sanitation.

The National Environmental Health Policy includes a situation analysis on sanitation. The policy recognises that sanitation especially in the rural and peri-urban areas has received only a little attention. This was already known when the National Environmental Sanitations Strategy was published in 1997, but little has improved since then. According to the policy, the government shall "assume its role as facilitator, motivator and researcher and promote ... technical and financial support ... [and] schools to give them key roles as bridges to communities." (Ministry of Health of Zambia 2008.) Other policies related to sanitation include Water Policy (2004) and the MDGs.

There are also several strategies on sanitation, some of which are in action, and some that have been forgotten. The WASHE concept (Water, Sanitation and Hygiene Education) was adopted in May 1996, which was probably the most significant strategy with respect to rural sanitation. Also the Poverty Reduction Strategy Paper (PRSP, Republic of Zambia 2006) and the National Decentralisation Policy (2002, launched in 2004) have played an important role in the sanitation sector. (NGO WASH Forum 2008,

22-23.) However, Community Water Supply and Sanitation Strategy (2000) and Mainstreaming Gender in Water Supply and Sanitation Sector (2000) and other papers have had a minor role in the improvement on sanitation (Ministry of Health of Zambia 2008).

The policies currently under work, NRWSSP and NUWSSP are expected to bring some coherence to the national implementation of sanitation projects.

4.2.2 Sanitation and legislation

The Zambian legislation is not too clear on sanitation. For a long time sanitation was considered a very private matter, and thus it was not necessary to mention it in the law (LWSC 18th July 2008). However, there are environmental and public health laws, which cover sanitation in one way or the other.

The Water Supply and Sanitation Act of No. 24 of 1997 established the water regulator (NWASCO) as means to improve water supply and sanitation (Ministry of Health of Zambia 2008). Another key element is the Local Government Act No. 22 of 1991 (NGO WASH Forum 2008, 23). In the Registration and Development of Villages Act section 18 empowers the chiefs to "assist in the improvement of all facilities necessary for the maintenance of health and sanitation in the villages". (Ministry of Health of Zambia 2008.) Other significant pieces of legislation are the Water Act, the Environmental Protection and Pollution Control Act of 1990 and the Public Health Act of 1995. (NGO WASH Forum 2008, 23.) Public Health regulations on latrine and drainage as well as on buildings state that new buildings are to be provided with sufficient and proper sanitary accommodation. For public buildings exact numbers for latrines are given. (Ministry of Health of Zambia 2008.)

4.2.3 Sanitation initiatives

There are several initiatives taken to achieve the MDGs and to get the country's sanitation back on track. The UN has played a key role in this. As early as the in the 80s, the decade was declared to be the International Water and Sanitation Decade

(1981-1990). However, since the emphasis was on water, not much was achieved in terms of sanitation. (Ministry of Health of Zambia 2008.) Now, the year 2008 has named to be the International Year of Sanitation, and it seems this has made the matter more approachable. Also in Zambia several smaller programmes have been initiated to improve sanitation.

In 1992, UNDP/World Bank Water and Sanitation group developed a method for better hygiene education. The S.A.R.A.R. principle emphasises Self-esteem, Associative strengths, Resourcefulness, Action planning and Responsibility. This method was piloted in 1993 in Africa (Botswana, Kenya, Uganda and Zimbabwe), and it gave birth to PHAST method. (Ministry of Health of Zambia 2008.)

PHAST, the Participatory Hygiene and Sanitary Transformation, was launched in 2003. The approach is attempting to get the people to participate in hygiene education and building of sanitation facilities. Ministry of Health of Zambia has found the approach good; it is already showing positive indicators in diarrhoeal disease reduction. (Ministry of Health of Zambia 2008.)

Participation is the key also in Community Led Total Sanitation (CLTS) promoted by UNICEF.

“CLTS is a nascent movement in which communities are facilitated to conduct their own appraisals and come to their own conclusions. Unlike earlier sanitation programmes, there is no hardware subsidy. Communities take matters into their own hands, latrines are dug and shared, landless people are provided places where they can dig theirs, and when coverage is complete and open defecation has ended, notice boards are put up proclaiming total sanitation. The benefits include better health, especially less diarrhoea; convenience, especially for women; increased incomes; less expenditure on treatment for sickness; a clean environment; social solidarity; and pride and selfrespect. Except for loss of income to local medical practitioners, all other local people appear to gain.” (Chambers 2005, 139).

CLTS was piloted in 2007 in Choma district and the results were excellent. 11 out of 12 communities were verified as open defecation free (ODF) and the sanitation coverage rose from next to nothing to nearly 100 % (in one case 102 %, there being more toilets than households). Also a CBTS (Community Based Total Sanitation, as CLTS but with nominal subsidies involved) project by WaterAid in Monze district indicated a rapid increase in the provision of toilet facilities. CLTS and CBTS can very well be the key to achieve the MDG target on sanitation. (NGO WASH Forum 2008, 10.)

4.3 National authorities

The government is highly determined to improve sanitation in Zambia. Their Vision 2030 states that Zambia would be a middle income country by the year 2030. This goal, being somewhat ambitious, indicates that long term solutions are needed in every development sector including sanitation. Short term solutions will not support the vision and thus should be overlooked wherever possible. (COWI 4th July 2008.) It would be important to find some political will to work on sanitation. In PRSP some optimistic results of improvement of sanitation are presented (Republic of Zambia 2006, 168, 186), but so far the results are showing slowly, if at all. In the following I will introduce the national authorities operating on the sanitation sector. See appendix 1 for a chart of the actor networks.

4.3.1 Ministry of Local Government and Housing

The Ministry of Local Government and Housing (MLGH) is the key institution responsible for sanitation issues in Zambia. MLGH controls the Local Authorities (LAs) in the districts. "MLGH provides policy guidance, technical and financial control, and facilitates mobilisation of foreign and local funds for capital development." (NGO WASH Forum 2008, 25.) Under MLGH has also been established a group (NSWG) to develop a detailed national sanitation policy. Also NRWSSP and NUWSSP are being developed by MLGH.

Also the Central Province Rural Water Supply and Sanitation Project runs under MLGH, even though the concentration is much on health. The project cooperates with MoH and MoE. (CPRWSSP 14th July 2008.)

4.3.2 Local Authorities

The districts are responsible for offering public health, solid waste management and water supply services in their area. There is no policy on drainage in Zambia, and yet the Local Authorities are responsible for offering the services. This does not always yield the best results, which is why there is a great need to develop a new policy on drainage as well. (NGO WASH Forum 2008, 23.) Earlier it was the City Councils that were responsible for sewage and water supply, but now this task has been given to the Commercial Utilities (CUs), such as Lusaka Water and Sewage Company which operates in Lusaka province. The change is due to the lack of resources on the LA level; it was easier to privatise the services than gain more funding on public services. (COWI 4th July 2008.)

4.3.3 Ministry of Energy and Water Development

The Ministry of Energy and Water Development (MEWD) is mainly in charge of managing the water resources. MEWD has created several sub-policies concerning water and sanitation but sadly many documents by MEWD are concentrating on water rather than sanitation development. (MLGH 14th July 2008.) As the ministry is in charge of energy and the whole Southern Africa is facing an energy crisis, the ministry seems to be more preoccupied with energy issues. This, again, points out the fact that the resources at ministries are poorly allocated and there are not enough people to work on sanitation, water and energy issues. Also there is a problem in the communications between the two ministries; the experts agree that the improvement in communication could very well make the progress more efficient. (Danish Embassy 26th June 2008; GTZ 30th June 2008.)

4.3.4 National Water and Sanitation Council and Devolution Trust Fund

As MEWD is preoccupied elsewhere, the sanitation sector requires a body to monitor events. For this, there is the National Water and Sanitation Council (NWASCO), which reports straight to MEWD. NWASCO is in charge of regulating the water and sanitation issues in the country and advising the governmental bodies in their decision making. NWASCO is also part of the National Sanitation Working Group (NSWG) working on the new national sanitation programme. The council's goal is also to keep track on all the NGOs who are involved in the sanitation sector and make sure that all of them follow the same policy.

For this goal, the Devolution Trust Fund (DTF) was established. DTF is a basket fund, which "assist the CUs to provide sustainable service provision to the urban poor" (Muyeba 2008). Since it is not certain how quickly the national policy will be launched, DTF has started to prepare a DTF concept for the NGOs and other actors in the sector to follow. This is to unify their efforts for the time being. DTF is a separate entity from NWASCO but yet supervised and controlled by it. DTF is also represented at the NSWG. (NWASCO 2 17th June 2008.)

4.3.5 Ministry of Health

Despite the fact that the lack of sanitation is a serious health issue, the Ministry of Health (MoH) is not interacting with the above mentioned ministries as much as one would expect. The health effects, which were already covered in chapter 3.1, are serious and for instance UNICEF is trying to promote them more. MoH is also in charge of the environmental health technicians (EHTs) who work at health centres all over the country. These technicians are supposed to promote the importance of sanitation in the remote areas and make sure proper sanitation facilities are built. However, since there is a considerable lack of funding, the environmental health technicians are often unable to do their jobs properly due to transport difficulties or such. (CPRWSSP 14th July 2008; COWI 4th July 2008.) Nevertheless, MoH is doing a lot of work for hygiene education and is supporting micro water supply and sanitation projects in rural areas (MoH 14th July 2008).

4.3.6 Ministry of Education

Even though the Ministry of Education (MoE) is not actively involved in sanitation sector as such, it is also an important entity. Since one important aspect of the improvement of sanitation is hygiene education, schools are the best place to start with. Organisations such as UNICEF and DAPP have been doing educational work at schools and working closely with MoE. Nevertheless, MoE ought to include sanitation and hygiene education more effectively to their teaching plans. The children are taught the importance of having a toilet as well as hygiene but again the resources limit the effect. MoE is also responsible for school sanitation, which is often implemented with the help of NGOs. (DAPP 4th July 2008.)

4.3.7 Other ministries

Several other ministries are involved in sanitation in one way or the other, which makes the coordination of responsibilities difficult. However, it is good that the main responsibility is shared with only a handful of ministries. The other ministries are Ministry of Community Development and Social Services (MCDSS), Ministry of Tourism, Environment and Natural Resources (MTENR), Ministry of Agriculture and Cooperatives (MACO) and Ministry of Finance and National Planning (MoFNP). MCDSS has a Department of Community Development, which takes part in sanitation discussion once the national policy is finalised. The department is mainly in charge of making sure that urban policies are implemented and followed by the population. (MLGH 14th July 2008.) MoFNP is responsible for funding to each ministry, and therefore the policies according to which funding is distributed make a difference in implementation of some programmes. MTENR and MACO are line ministries involved in mainly the environmental aspects of sanitation, in general and from the agricultural point of view respectively.

4.3.8 Environmental Council

The Environmental Council of Zambia (ECZ) is a statutory body established in 1992. The council reporting to MTENR is mandated to protect the environment and control

pollution. Its mission is to ensure environmental protection by enforcing regulations, its general functions being protecting the environment and controlling pollution. Also the environmental impact assessment falls under ECZ. The Council also operates as an advisor to the government on the formulation of policies on natural resources and environment. The council is being informed by the NSWG about the development of the new sanitation policies but it does not actively participate in the sanitation discussion. (Environmental Council of Zambia 2005.)

4.3.9 Commercial Utilities

Formerly operated by City Councils, today private water and sewage companies are responsible for drainage and solid waste management in the districts. However, most facilities result in inadequate sewage treatment with the increase in population and lack of maintenance in equipment (NGO WASH Forum 2008, 11). In some districts such as Kitwe and Ndola the sewage is guided on dry beds to fertilise the land, in other areas the people tend to do this themselves by blocking the pipes. On the whole, the CUs are managing their responsibilities insufficiently but as there is no one to replace them and the law contains loopholes, the situation is not about to change soon. (CPRWSSP 14th July 2008.)

4.4 Development aid and sanitation

The system of government is not the only important aspect when viewing the sanitation sector in Zambia. As a developing country, Zambia relies heavily on development aid given by donors, NGOs and other international organisations such as the UN and the World Bank. In this chapter, I discuss the development aid Zambia is receiving. I will move on from the current state and goals of the aid towards the actions, projects and finally the actors involved in the development of the sanitation sector.

4.4.1 Aid harmonisation and sanitation

In 2005 donor countries signed a declaration about methods with which the results of development aid could be improved. This document, called the Paris Declaration,

includes an intention to unify the aid methods, often referred to as harmonisation. The goal is to change the structure of development aid from individual projects to programmes controlled by the governments of both donor and recipient countries. (Ministry for Foreign Affairs of Finland 2007, 4.)

Zambia has attempted to improve the harmonisation of development aid required by the Paris Declaration. This is necessary, because the donor countries demand better and better national policies and programmes before they give aid. Twelve donors have signed the *Zambian Harmonisation Memorandum of Understanding* document, which ought to enhance the harmonisation process. However, the lack of resources in ministries and difficulties in the follow up process may still slow down the harmonisation process in Zambia. (OECD/DAC 2006, 143–149.)

Aid harmonisation is extremely important in the sanitation sector as well. Some progress has been made by creating the *Zambian Poverty Reduction Strategy Paper* (PRSP). The strategy defines how the country intends to utilise the additional resources needed to reduce poverty, and the PRSP working group consisted of ministries as well as the private sector and some NGOs (Koponen & Seppänen 2007, 352). Nevertheless, there are some deficits in the strategies, such as the unclear operating policies and a unanimous governmental vision of the situation. On sanitation, the document offers plans of action with reports of the past projects, as well as a budget required to implement the plan (Republic of Zambia 2006, 183-195). Because there is no proper follow up, it is up to the donors to keep track on the agenda, making the process inconsistent. Most closely the agenda is being followed in the sectors of education and health care, whose organisational structure is the clearest. On other sectors within the development aid the agenda of harmonisation is followed irregularly, if at all. For instance on water sector there is no common policy and the harmonisation process proceeds very slowly indeed. (OECD/DAC 2006, 143–149.)

In terms of harmonisation the actions of donors are just as important as the plans of the developing country. Harmonisation includes the intention of increasing development aid so that there is more support and cooperation between the donors. According to a report by OECD (OECD/DAC 2006, 143–149) only 17 % of donors in Zambia cooperate together or with NGOs. Still the donors have attempted to create a common strategy, the

first draft of which was published in 2006. The strategy contains a division of cooperation fields and tasks between the donors. (Ministry for Foreign Affairs of Finland 2007, 24.) This is the first step towards efficient cooperation but much work still remains to be done.

4.4.2 The Millennium Development Goals and sanitation

The MDGs are not separate units; they all affect one another. Even though there is not one single goal for sanitation as such, which include improvement of sanitation by nearly every MDG, and target 10 of MDG 7 is to “halve, by 2015, the proportion of the population without sustainable access to safe drinking water and sanitation” (Republic of Zambia 2008, 29). According to UNESCO (2003, 6) sanitation and clean water are included in the MDGs both in the long and the short term. Especially reducing hunger and poverty are closely connected with sanitation. By developing sanitation the contamination of drinking water can be prevented and thus control the spreading of disease. By using composting latrines human excreta can be returned back to the natural cycle by using it as fertiliser, which improves the fertility of the land. Child mortality can be reduced by securing access to clean water and nutrition. This all contributes to sustainable development and in turn reduces poverty. In addition, improving sanitation at schools will support the education of girls, which again is an investment for the future. (UNESCO 2003, 6.)

It can be argued, that the MDGs are simply “an outcome of political struggle and thus an incomplete compromise” (Wiman *et al.* 2007, 23). Therefore, the MDG-based approach is focused mostly on measurable targets instead of the institutional and political means for reaching them. In order to achieve the MDGs, a radical change in mindset is required. The traditional linear wastewater management is to be transformed into a recycling system, which pays attention to the requirements of the MDG. The MDGs have been an incentive to develop new technologies in energy production and waste management, but in regard to sanitation not much development has occurred. As an example of how difficult it is to give up a conventional method is a suggestion made by engineers in the 1970s. The idea was to start recycling wastewater and rainwater. (International Hydrological Programme 2006, 2.) Now, 30 years later, recycling grey and black water is still an exception which does not show many signs of popularity.

The Millennium Development Goals are rather ambitious and, in many countries, not close to being achieved (SEI 2005). Be that as it may, they act as excellent guidelines to development work and political decision making. In Sub-Saharan Africa, there has been no mentionable development or the situation has gone from bad to worse. Especially the MDGs regarding drinking water and sanitation seem to be far from achieved. (SEI 2005, 40.)

As Zambia is determined to reach the Millennium Development Goals and is aiming to become a middle income country by 2030, a lot more work has been put into sanitation improvement in the recent years. However, the MDGs and the follow ups by SEI (2005) show clearly that the situation has not been developing according to plan. In Zambia, a lot of the concrete work on sanitation is still done by NGOs and there is a lack of players at the higher levels. The active participation and attitude of the local government is the key what is needed to make a difference (Danish Embassy 26th June 2008). Fortunately, it is still not too late to be optimistic. According to the representative of UNICEF (22nd July 2008), it is still possible to reach the MDGs related to sanitation in Zambia. UNICEF is been promoting Community Total Led Sanitation programme (CLTS), which was more closely examined in chapter 4.2.3. The Millennium Development Goal Progress Report indicates that the main challenges in reaching the water and sanitation goal (target 10) are the need for coordination between MEWD and MLGH, the poor progress in the implementation of decentralisation process, the lack of human and financial capacity, community participation and providing low-cost sanitation technologies. However, the supportive environment has become more encouraging with the National Water Policy being reviewed by Cabinet and the National Rural Water Supply and Sanitation Programme 2006-2015 in place. The main instrument for reaching target 10 of the MDGs is the district strategy planning and implementation of the decentralisation policy. (Republic of Zambia 2008, 29.)

4.4.3 Sanitation projects

Several projects on sanitation have been initiated by NGOs and other development organizations, and the most significant of them are briefly introduced here. Most of the sanitation projects concentrate on developing the existing sanitary facilities in public

buildings such as schools and health centres. Toilets built in these projects are often improved pit latrines or VIPs (see chapter 3.2.1). Some NGOs are also working on ecosan projects (see chapter 3.2.2) to emphasise the environmental effect of sanitation. However, most of ecosan projects in Zambia have not finished the full cycle and it is difficult to tell whether ecosan would be a sustainable solution for the sanitation problem.

Aside from different types of toilets, there are also several different methods of conducting the projects. Some projects are fully funded by donors, NGOs or other organisation while others are partly subsidised. Yet it has always been difficult to maintain the on going projects once the volunteer workers have left the project communities. There are two methods worth mentioning, that seem to be tackling that problem.

WaterAid, a charity organisation originally from Great Britain, has been one of the major contributors to Community Based Total Sanitation projects (CBTS). CBTS is based on the idea that communities will continue to work on the project long term only after they have the sense of ownership of the project. The communities take care of training and organisation of the labour and maintenance of the facilities while the supporting organisation subsidises building materials and offers training of the workers and the entire community. With the acquired ownership, the subsidies are not simple charity but tools to allow the community to work on its own. (WaterAid 1 & 2 30th June 2008.)

A little more advanced form of CBTS is Community Led Total Sanitation (CLTS), strongly supported by UNICEF among many others. CLTS is different from CBTS in its form of subsidies: that is, there are none. The communities are being educated of the importance of sanitation, hygiene and construction of latrines. The communities are responsible for labour, materials and maintenance, and receive no financial support. Yet it is being reported that the communities in fact do find the resources to work – and most importantly keep working – on sanitation at their community. (Harvey & Mukosha 2008.) The challenge with both CLTS and CBTS is to find the will from the communities to start working; ownership alone is not the key. (UNICEF 22nd July 2008.)

4.5 Actors contributing to sanitation development

Here I have gathered the main actors contributing to the sanitation sector in Zambia. Development aid is divided between the donors, who are responsible mainly for strategic development of the different sectors together with the national authorities, and the NGOs. The NGOs often operate separately from the national authorities and are becoming increasingly involved especially with the local authorities. Organisations such as the World Bank and UNICEF are important actors in the sanitation sector, as well as the foreign experts assisting with strategy planning and implementation.

4.5.1 Donors

There are a lot of donor countries operating in Zambia, from Europeans to Americans. Here I will, however, concentrate on the donor countries who are the key players in sanitation. The donors have agreed with themselves to share the responsibilities of different sectors among them. There are one or two countries leading the work on every sector to make sure that operations are coordinated and organised. This is part of the harmonisation process set in the Paris Declaration. The main donor countries involved in sanitation are Germany and Denmark, which share the lead of the water and sanitation sector. Other countries doing sanitation work include Ireland and the Netherlands. Also Japan and Sweden are supporting some projects but to a lesser extent. (Danish Embassy 26th June 2008.)

The Danish development aid programme DANIDA is in charge and a part of several sanitation projects in Zambia. Germany on the other hand is mainly represented by GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit GmbH) who is also part of the National Sanitation Working Group. GTZ also acts as an advisor to DTF and works more closely with NGOs. There is a Danish and a German representative at the National Sanitation Working Group working on the national policy. They cooperate so that whenever the one is not available to participate in a meeting, the other will attend to make sure the donors are represented. (Danish Embassy 26th June 2008.)

4.5.2 Non-governmental Organisations

Due to the lack of resources, a great deal of responsibility is put on the shoulders of NGOs. Both local and international NGOs operate in several sectors in Zambia. Many of them cooperate with each other or with the donors, but the state of cooperation is far from perfect. Many are involved in one or two sanitation projects, such as DAPP, Plan International, Oxfam, World Vision and Rotary International. I will not, however, include them in this paper as their role is a minor. Presented in this paper are the NGOs which are most active in the Zambian sanitation sector.

This study acknowledges the three most active NGOs of the sector. Water and Sanitation Association of Zambia (WASAZA), CARE Zambia and WaterAid have been contributing a great deal to the sanitation work in Zambia. CARE Zambia is involved in several sanitation projects done all over the country. They have also initiated a project on sustainable sanitation, which includes building and maintenance education of composting toilet facilities. (CARE Zambia 4th July 2008.)

Originally from the UK, WaterAid is a worldwide charity organisation working on water and sanitation issues especially in developing countries. At the moment WaterAid has projects in 17 developing countries mainly in Africa and Asia. Their mission is to enable the poor of the world to gain access to clean water, sanitation and hygiene education. In Zambia, they operate in rural areas and are involved in sanitation projects around the country. WaterAid has been encouraging Community Based Total Sanitation (CBTS) programmes which seem to be yielding some good results in rural Zambia. CBTS encourages the local people to take more responsibility of the projects with only small amounts of outside help and subsidies. However, the people are not always willing to adopt new things quite as easily. (WaterAid 1st July 2008.)

WASAZA acts as the main water and sanitation promoter in Zambia. They encourage dialogue between the actors of the sector as well as offer professional knowledge. WASAZA attempts to enhance the capabilities of the water and sanitation sector through cooperation, discussion and research. WASAZA, as well as the above mentioned non governmental organisations come together at a common forum established specifically for the purpose of NGO communication on the sanitation sector.

The NGO WASH Forum is a forum for all the NGOs operating in Zambia to meet and discuss sanitation issues and plan action steps. (UNICEF 22nd July 2008.)

4.5.3 International partners

In addition to the ministries, the donors and the NGOs, there are several other organisations working on the sanitation sector in Zambia. These international partners work as facilitators, funders and advisors for the local work, and are involved in several projects in the country. Here I will introduce UNICEF, the World Bank and the consultants to the sanitation sector.

UNICEF is the main UN facility working on sanitation in Zambia. Concentrating on hygiene education, UNICEF has taken charge of the NGO sector and works very actively for sanitation. Cooperating with MoE, UNICEF has organised hygiene education at schools. UNICEF has also played an important role in the founding of NGO WASH Forum and is currently acting as the secretariat of the forum.

UNICEF has initiated a few projects on Community Led Total Sanitation (CLTS). The purpose of CLTS is to motivate the local people to improve their sanitation themselves without subsidies and extra labour. UNICEF has provided some projects with only the training materials and has thus managed to motivate the locals to work on sanitation projects at their villages. This, as WaterAid's CBTS, has proven to be a very effective, yet challenging method of sanitation development. (UNICEF 22nd July 2008.)

The World Bank is involved in Zambia in many development areas. The Water and Sanitation Program (WSP) is the World Bank's multi-donor partnership operating in several developing countries on water supply and sanitation projects with the aim of achieving the MDGs of halving the proportion of people without access to safe drinking water and adequate sanitation by 2015. WSP cooperates with NGOs, governments, donors and the private sector. In Zambia WSP is funding Lusaka Water and Sewage Company (LWSC) which is in charge of sanitation projects in Lusaka area.

It is also fairly common to hire a consultant to assist with the work on national policies. There are consultants working at NSWG as well as drawing of the national policies and programmes. COWI is a Danish consultant agency who was invited to work with MLGH, and participates also in the meetings of the National Sanitation Working Group. COWI has mainly an advisory role and it is actively participating in the drafting of the National Urban Sanitation Programme. COWI is the main consultant working on the issue and is based at MLGH. Also local consultants are working on the national sanitation policies and programmes, and it is in fact preferred to include an expert with years of experience in Zambian sanitation systems (Ministry of Local Government and Housing of Zambia 2008a).

5 THE VIEWS OF THE ACTORS

The research data consists of several interviews and documents of the Zambian sanitation sector. In the following chapter I will attempt to present the data and some of the key issues that came up during the process. Here I concentrate on the statements made by the interviewees. All the interviews were conducted according to the same structure (appendix 2), with the same themes emphasised differently. The main themes appearing in this research are governance, development aid and planning, which I will study more in detail.

5.1 *About the interviews*

For the research, I interviewed 15 people in 13 different organisations; both NWASCO and WaterAid were represented by two persons. The interviews can be divided into three groups: national authorities, international actors and implementers. The groups include the different organisations as follows.

Table 5: Interviewed organisations in groups

National Authorities	International Actors	Implementers
MoH	Danish Embassy	DAPP
MLGH	GTZ	CARE Zambia
NWASCO	UNICEF	WaterAid
LWSC	COWI	CPRWSSP
	Finnish Embassy	

This divide is rather crude due to the complexity of each actor's role. The National Authorities -group consists of ministries and CPRWSSP which is a project under MLGH, International actors include significant actors who also attend the NWSG meetings and the Implementers are NGOs who are conducting projects on sanitation. Some organisations could have fitted into several groups, but this divide emphasises the role of each which is most significant as far as this research is concerned. A graphic organisation chart can be found in appendix 1.

The divide also emphasise the different networks that the actors are a part of. As mentioned earlier, the Implementers – mainly the NGOs – share more stable network as they have consciously formed a forum to communicate in. The National Authorities, however, share less of their interests and face problems with defining the hierarchy of their network. They have come together for the single issue, sanitation (or sanitation policy to be more exact), and thus have more unstable, uneven power structure within their network. The entire network of the sanitation sector is somewhat unstable; the actors may have conflicts of interest and they are kept together merely by the issue they are working on. It is indeed a great example of an issue network (Peltola 2001, 194-195).

As the following themes and concepts are quite broad, I have divided the following chapters into subcategories according to the points which were raised by the actors. The chapters will include both challenges as well as positive remarks on the issues in question. I will compare the comments made by the actors of different groups in cases where comparison is possible. In qualitative research, comparing results can be nearly impossible (Eskola & Suoranta 1998, 66) and I do not wish to present the results comparatively as such. I will, however, consider the difference of opinion based on the group divide I have created.

The purpose of this chapter is to paint a picture of the interviews and the actors' opinions. I have divided the chapter into parts according to the different areas viewed as challenging by the actors. As sources of inspiration for this division of challenges I have used the work of David C. Tipping *et al.* (2005) based on the MDG Task Force and Roberto Lenton *et al.* (2005), who all address the constraints and issues of the sanitation sector. The issues pointed out in both of the works were all found also in my research, and they fit nicely into four different categories: governance issues, institutional constraints, finance factors and technical challenges (Tipping *et al.* 2005, 45; Lenton *et al.* 2005, 62-77).

5.2 “The biggest problem we have is governance”

Several interviewees pointed out the number of governance related problems. It seemed that state governance was their main concern. Many problems in water and sanitation sector can be put under governance; service management and the inefficiency of sector organisation which can be referred to as “governance problems”. Especially the lack of good governance can leave its mark on a country’s sanitation sector. Good governance leads essentially to corruption-free, transparent, effective and participatory governance, but most importantly, it lays a basis for the future needs of the society in question. (Juuti *et al.* 2007, 187.)

Tipping *et al.* (2005, 50) also point out that it has become evident that the achievement of the MDGs regarding water supply and sanitation would be possible by putting in place clear policies and strategies. Issues such as decentralisation, power shifts and problems in drawing policies, definitions and priorities are also identified as key elements of political constraints (Lenton *et al.* 2005, 64). Behind all of these aspects, one factor is a major player: political will.

5.2.1 Political will – “Here in Zambia, completely different mindset”

One of the chief constraints to expanding sanitation coverage is the political will – or the lack of it. Recognised by both Lenton *et al.* (2005, 62) as well as Tipping *et al.* (2005, 50), it was also mentioned by several of the respondent. Also Myles F. Elledge (2003, 19) has identified political will as the first key element in “the essential ingredients of good sanitation policy”. It became soon apparent in this research as well that since sanitation has become a politically sensitive issue, it is difficult to find the political will and commitment from the parties responsible (LWSC 18th July 2008).

”But it's political will in Zambia, it is that is what is needed, you need strong will to allow the private sector and to allow districts as well to actually do what they are supposed to do and give them resources to work with.”

(Danish Embassy 26th June 2008.)

Political will and power struggles are the factors keeping decentralisation from happening swiftly. Intertwined with governance is also accountability. Financial aid from donors flows through the government to different programmes. Some find that there may be a conflict between the intentions of the donor and the programme finally receiving the money. This results as poor accountability which does not improve the government's position in the eyes of donors. This requires actions from the government to familiarise itself with the different programmes to see if they really fit the description stated in the policies. (NWASCO1 17th June 2008.) However, many seem to think that there is no such problem.

“The CLTS has turned out to be dramatically effective. If the method is being used across the country and different ethnic groups adopt it, the MDGs can be achieved. Also political will is needed, the government can not be resistant to the model.”

(UNICEF 22nd July 2008.)

“But that’s why political will is important to want things to happen, but here in Zambia it’s a problem, completely different mindset.”

(Danish Embassy 26th June 2008.)

Several respondents, especially but not solely those foreign to Zambia, felt that the cultural mindset in Zambia is remarkably different from, say, the Western mindset. However, it could be argued that the difference in mindset is the cause for somewhat inefficient communication between the International Actors and the National Authorities. Still, whatever the actual cause, political will is an important factor, no matter which state we are talking about. Often the problems come down to more concrete issues such as resources and capacity, but in the background it is the political decisions which are mainly accountable for the delays or the progress made.

5.2.2 “Decentralisation is a mess”

Launched in 2004, the National Decentralisation Policy is still being enforced by the government. The decentralisation process has given the city councils more authority,

which has several good sides. The councils tend to *"promote the local enterprise and local private companies so local consultants are hired to work on sanitation"* (COWI 4th July 2008), which is beneficial for both the country's economy as well as the people's personal situation. However, in most of the districts the decentralisation process has not been finalised. The councils do not have enough resources; there is, in fact, *"a massive national internal debt – there are too many workers to whom they cannot pay their salaries"*. (COWI 4th July 2008.) It is therefore problematic for the councils to manage their new responsibilities. Even though decentralisation, dividing the responsibility, is a good thought, it seems that even the government itself has not been able to follow through with the decentralisation policy:

The government have been wanting to implement decentralisation policy, has put itself to be the policy driver only and after should be the people that are on the ground. Now, how do we see that in practise? We have seen the government with that policy still want to come in and want to start driving programmes. It's not for government to drive programmes in my opinion, they don't have the capacity, they don't have the understanding, techniques on the ground, they should just facilitate. Facilitate institutions that have the capacity to deliver on the ground. They'll want to define a programme that they do not understand how things are operated on the ground, they take that programme people are telling them "what are you talking about, where is the money for us to implement that, this can't work." So the government to this saying "no, we are not decentralising" or "we are centralising", still wants to follow it and want to define and say that "no, you do this", that should not be the case.

(NWASCO1 17th June 2008.)

It appears that there is the intent to decentralise but in practice it is not as easy. The government is not willing to let go of the implementation. It is difficult to say whether this is because the districts have no resources or capabilities of implementing themselves or whether the government simply will not let go of the power.

"As part of decentralisation, sanitation is being devolved to local governments. This transition un-bundles the roles of policy-makers by

level of government, creating challenges to sustain national-level momentum by working through varying levels of capacity at the sub-national levels. ... [S]uccess depends on implementation, and implementation is a slow and challenging process. In fact, the major difficulty ... is how to get the policy implemented at the lowest level of government.”

(Elledge 2003, 18.)

An interesting factor is that the ministry representatives did not acknowledge decentralisation as a problem. However, many of the interviewees disagreed.

“The government’s capacity to implement is very very low. And decentralisation is not moving, you can talk to more people they will tell you the same thing.”

(Danish Embassy 26th June 2008.)

Another difficulty with sanitation work is the attitude in councils of rural areas. Many do not consider sanitation as important and the rest see it as individual responsibility. (COWI 4th July 2008.) Unfortunately this problem does not include only the rural councils; a change is required also in the mindset of the government (MoH 14th July 2008).

On the whole, decentralisation is a very important process that ought to be completed. The process is being prepared gradually, but there are still no proper mechanisms to channel money to the districts. (Antila 4th August 2008; GTZ 30th June 2008.) The success of decentralisation process reflects not only to governance but also to the conditions of poor people living in rural areas.

5.2.3 “The one who has the money has the power”

It is one thing to plan and implement a strategy and to form groups and committees to work on a problem than it is to make everything go smoothly in practice. Elledge (2003, 21) emphasises the importance of “institutional dimensions” when discussing the responsibilities of implementation. It is good to decentralise responsibility but

uncontrolled division of roles and responsibilities “can lead to a confusing mix of institutional activities, sometimes resulting in overlapping authorities or in a situation where no organisation seems to have clearly defined responsibilities, thereby resulting in gaps in sanitation coverage, or even conflicting directives” (Elledge 2003, 21).

“The problem is everyone wants to be involved in the implementation, everyone has roles and we have forgotten these roles, we have ignored these roles because we want to be at the implementation phase where the money is. It is a problem, and that brings the problem of poor accountability to the surface. ... You play your role, you do your things and we’ll have the solution. But this time we have an unnecessary conflict. Why? Because everyone wants to be where the [money] is, so it’s a problem. ... We can turn it around in five years, this country we can turn it around. All we need is people that are straight and see the interest of the, the problem is that people want to have pockets full of money.”

(NWASCO 17th June 2008.)

The criticism comes from all sides, from National Authorities to International Actors. The Implementers hardly mentioned the conflict of money and power, and perhaps that is because the NGOs are out of the “power loop” so to speak.

“But it is a low level of independency and transparency would be at least questionable. Or you can have it as a statutory instrument, statutory body with a board of directors, consisting of all the ministries that are involved, private sector and donors ... It is a political decision, the one who has the money has the power.”

(GTZ 30th June 2008.)

The question of power distribution cascades over the entire sanitation sector and covers all the issues involved. In the following chapters, where the progress and challenges of the sector are discussed, whether it was about decentralisation and governance or development aid and education, the question of power distribution is lurking in the background. It comes down to the relations between the actors and is thus a permanent

aspect of this analysis. The importance of sanitation issues fluctuates during political terms of office, being more important when policies are drafted or under elections (Lenton *et al.* 2005, 64). The question is how to maintain the interest of the governing organ throughout the terms of office. The decentralisation process and cooperation of the actors outside the central government have the chance to make a difference.

“The central level does not reconstruct the decentralised level. And so together we have power, ... ministries do not give power away voluntarily.”

(Danish Embassy 26th June 2008.)

One of the key elements in the discussion of power distribution is the on going decentralisation process. Power distribution is, in fact, a key element when discussing the decentralisation of power and responsibility from the central government to the districts. Power distribution also acts as an important factor when discussing issues such as capacity and infrastructure; whether or not anything is being done. Power itself is neatly wrapped up with political will, something that the interviewees brought up from time to time. Only the ones who have power can make something happen, but do they have the will to make it so? I will discuss the key points related to the power struggle in the sanitation sector further in this paper.

5.2.4 The policy on sanitation – “*There is none*”

In Zambia, there is no national policy on sanitation. There are elements of it in various documents but an official national policy is still lacking. This causes problems in the implementation of projects and cooperation between different actors.

“Currently there is no operational sanitation and hygiene promotion strategy. ... So that document is not there that binds everyone who is actually working in the water and hygiene education and sanitation. ... Because uniformity can only be there if there is actually the policy that governs.”

(CPRWSSP 14th July 2008.)

However, both urban and rural programmes (NUWSSP and NRWSSP) are being prepared with the help of experts. It is difficult to say when the new policies will be implemented but the most optimistic evaluations suggest early 2009 (COWI 4th July 2008). Until then Zambia needs to survive the current policies, which are according to several respondents "full of potholes" (Danish Embassy 26th June 2008) and "information gaps" (COWI 4th July 2008). Since there is a lack of a clear national policy, the government tends still to regard sanitation as an individual responsibility (LWSC 18th July 2008) and thus refrain from doing anything about it. Especially in peri-urban areas the situation is difficult due to the inadequate infrastructure and poverty (NWASCO2 17th June 2008). The new national policies are expected to change a great many things, as well as getting closer towards integrating sanitation as a part of different policy sectors, such as public health, housing and environment.

"National urban and sanitation program is a long term investment program. Sanitation is integrated in a sense in low-cost and peri-urban areas. Starting point is public health. ... All is integrated, the attempt is a holistic perspective in the program."

(COWI 4th July 2008.)

The statement above strengthens the idea that sanitation is becoming more and more part of every policy. MoH and MLGH are already working together on the policy, and with some time, other aspects such as community development and environment can be more actively included in the sanitation discussion. This, however, will take time and will not happen overnight.

As there are so many actors involved, there are of course problems. If the donors do not agree with the ministries, the policy preparation will come to a stand-still. Disagreements could be avoided by adhering directly with the Paris Declaration, which emphasises the government's ownership of the projects instead of the donors. However, the donors are part of the National Sanitation Working Group for a reason, to assist the government and provide expertise (GTZ 30th June 2008), so in theory agreement is more likely to be reached through discussions.

“The donors don’t agree with the ministry then nothing’s going to happen, so I think that’s what’s happened [with the policy development]. All donors should follow the Paris Declaration, follow what the government is saying. Everything should get on much better once the policy is out, apparently.”

(WaterAid2 30th June 2008.)

It is needless to point out that a great deal of work and effort is put into the drawing of new sanitation policies. Zambia is quite keen to attempt to remedy the problems. A bonus is also the Vision 2030 of Zambia, which targets to turn Zambia into a middle income country by 2030. This vision includes long-term plans and commitment on all areas. Some argue that the policies drafted at the moment are too ambitious and are unable to be implemented by the weak institutions involved. (COWI 4th July 2008.) However, this remains to be seen.

“The government should first look at, ok what policies, and they need to do that in consultancy, what policies do we need to put in place in order to enhance sanitation provision.”

(NWASCO1 17th June 2008.)

As mentioned earlier, successful implementation of the new national policies requires cooperation from all sides. All the actors need to agree on the methods and definitions of the official documents in order for it to work efficiently. However, as can be seen from the following chapter, finding suitable definitions or agreeing upon them is often easier said than done.

5.2.5 Water vs. sanitation

The sanitation sector cannot be defined simply as many of the actors find that the sector is tightly linked to water issues. Already the title of the national policy reveals that Water Supply and Sanitation go hand in hand. Be that as it may, the unification of these two issues has already caused problems in terms of aid and funding, as already described in chapter 3.2.

“The amounts of water and sanitation is increased tremendously compared to the last year. So once again I think it’s not the question whether we have enough money available, I think it’s a question of allocation.”

(GTZ 30th June 2008.)

“There is more money for water, sanitation is done mainly by Care and the EU.” (LWSC 18th July 2008.)

The matter comes down to allocation of money. While more money is being directed towards water and sanitation, water still takes the bigger share of it. As the charts on the page 25 indicate, sanitation is still a relatively smaller factor in WSS-work. It is interesting, that many of the difficulties associated with drawing a national policy on water supply and sanitation are limited to only sanitation. The water sector, it would seem, is well looked after.

“There are no specific policies on sanitation, on water there is.”

(LWSC 18th July 2008.)

The national programmes for water supply and sanitation should include sanitation in greater detail. However, sanitation still remains a part of water management instead of being its own entity. Yet, it is not a question of under which heading sanitation development is put; it is more of a question of the effort put in the actual work. The respondents felt that sanitation goes too much hand in hand with water, but they are, in fact, too very closely related areas. It seems that the acute problem is the lack of interest towards sanitation, which leads to inadequate funding of the sector.

5.2.6 What is adequate sanitation?

One important task of the new national policies on sanitation is to define what adequate sanitation means. The importance of accurate definitions does not limit to the national policies but definitions need to be accurate to comply with international standards. Many respondents pointed out that one of the main weaknesses of the Zambian

sanitation policy is the lack of clear and unified definitions (COWI 4th July 2008; UNICEF 22nd July 2008).

“There is no definition, we’re not able to capture the achievements.”

(MLGH 14th July 2008.)

The Zambian government has defined adequate sanitation differently than the definitions used by the UN institutions. The government definitions cover only VIP and flush toilets whereas the UNICEF/WHO JMP definition includes a pit latrine with a slab. Fortunately the government has started to clean up its definitions slowly and the new policies do also cover a traditional latrine with a smooth, cleanable surface. (UNICEF 22nd July 2008; DAPP 4th July 2008.) It is good that this progress occurred because the unclear definitions also distort the presented figures. The ministry's standards cause the sanitation coverage rate to be as low as 4 % and without a standard definition it is difficult to capture the achievements (MLGH 14th July 2008; see also chapter 3.2). Of course, changing the definitions is always up to political will as well.

“One problem is that definitions are not so clearly set concerning coverage. The question ‘do you have access to water?’ can be answered to in so many ways. It does not specify how far you’d have to go, climb over church’s wall with a canister, or how stable or unstable the water source is. In its opinion, Zambia is doing well in coverage. Of course it is a politically sensitive issue as by changing the definitions also the coverage rates fall.

(COWI 4th July 2008.)

The redefinition of adequate sanitation causes new problems. There is a conflict with the law on solid waste: it is forbidden to dig a pit and bury the waste, which is the case in the rural context. The sanitation definition, which has been approved by ECZ, covers 5 sanitation facilities, including pit latrines which are against the law. (MLGH 14th July 2008.) Nevertheless, when the new national policies are launched, the definitions should slowly be unified (COWI 4th July 2008).

Many implementers offer ecological sanitation as a solution for the poor and densely populated areas. In Zambia, unlike many other countries including Germany (WaterAid2 30th June 2008; GTZ 30th June 2008), there is no legislation prohibiting the use of human waste as fertiliser.

“In fact here they are trying to promote it, like Lusaka Water and Sewage Company, I think they have been trying to promote that.”
(WaterAid1 30th June 2008.)

Even though the concept of ecosan is familiar and used by the people (GTZ 30th June 2008), no one is willing to admit that they use such material as fertiliser. The general attitude makes it difficult to even mention the issue.

“Legislation is not specific as the topic has been taboo. Pilot is therefore done quietly. There is a fear of resentment. The Ministry of Health and government are not good with it, some units are, but they are not convinced enough to make a policy.”
(MOH 14th July 2008.)

It appears as ecosan will not make it to the public policies yet. It is again the question of definitions, which toilet facilities and which waste treatment methods are allowed. If it is not stated in the law or in the policies, it is up to the people themselves.

5.3 Institutional constraints

As pointed out by Lenton *et al.* (2005, 64), there are two types of institutional constraints standing in the way of expanding access to sanitation services: “the lack of appropriate institutions at all levels, and chronic dysfunction of existing institutional arrangements”. Capacity building in authority level as well as regarding education and work targeted towards communities and increasing partnerships are issues that are in need of development, which is also recognised by the interviewees.

5.3.1 “No one is responsible”

The sanitation sector in Zambia consists of several actors, each of them having their own opinions, agendas and responsibilities. The actors have been brought together by the common goal: to improve sanitation in Zambia. This does not, however, make the achievement of the goal all that much easier. It is often a question of leadership, power distribution and implementation – some elements that will be discussed below.

When talking with the respondents, the main issue to get my attention was the fact that no one seemed to be responsible for the country’s sanitation. Yes, certain roles were identified but the overall picture seemed vague. The ministries which coordinate the water supply and sanitation programmes seemed to be on the top of things. However, even they admit there is a problem of leadership.

“There is no leadership in sanitation, it is diffused with too many organisations. No one is responsible.”

(MLGH 14th July 2008.)

When even the ministry in charge of the sanitation programmes is finding the situation unclear, it is to be expected that the other actors are not too far behind. Needless to say, it was not a surprise when the other respondents agreed that leadership is required. All the actors referred to the leadership as being insufficient or even nonexistent.

“It is everyone’s responsibility, government, service providers as well as users. A coordinator is needed, a leader, so partners can come together they need a secretariat.”

(LWSC 18th July 2008.)

The responsibility of strategy development and the actual implementation should be shared between different actors. It is a question of who is responsible and for what. The general view was that the ministries, especially MLGH, were in charge of the policy development while the CUs were the key element in the actual implementation. The NGOs and Local Authorities, the Implementers, were the ones assisting and

contributing to the work done on the ground level. The International Actors acted mainly as advisors in the working groups and funders for the projects.

“It [developing the strategy] is supposed to be done by the Ministry of Local Government and Housing, they are less responsible for it and they are doing it via this programme development, trying to involve more or less all the necessary stakeholders. I’m quite optimistic, in the rural programme we are almost there already.”

(GTZ 30th June 2008.)

“The role the local authorities should now come to enforcing ... and they go to rural areas and they work with chiefs and whoever on the ground and enforce.”

(NWASCO 17th June 2008.)

“A big issue is that the CUs are responsible for sewage and treatment work. It is still commercially attractive to unsludge septic tanks but drains etcetera are sitting under the council who has no resources.”

(COWI 4th July 2008.)

It seems that different tasks are the responsibility of different actors. This kind of delegation of tasks makes sense but it can only work if there is a unanimous opinion of the leader. In fact, even though the MLGH is coordinating the sanitation programmes, the actual lead of the sanitation work can be found elsewhere. Even though it would be expected to find the leading party in the National Authorities group, it turned out that the International Actors and the Implementers felt the leadership had been taken up by UNICEF. In fact, it would appear that even though the National Authorities seem to hold on to the power in theory, they reject the responsibility of leadership. They would have the power to nominate a leader or act as a leader themselves, but seem to be unable or unwilling to either distribute or utilise their power.

“Like UNICEF taking the lead on sanitation, that’s because the UN has the year of sanitation so the UN focuses a lot on that, and we say ok fine,

someone's willing to do something special so let them do it. But we all do it together but they just take the lead."

(Danish Embassy 26th June 2008.)

UNICEF is indeed doing a great deal of work both on implementation work and coordination between the NGOs, and they are also part of drawing the new water supply and sanitation programmes. In fact, they seem to be active in every area of the sanitation sector. An actor like this is useful to have, especially when it is felt that the government should not be too active in the implementation phase.

"It's not for government to drive programmes in my opinion, they don't have the capacity, they don't have the understanding, techniques on the ground, they should just facilitate. Facilitate institutions that have the capacity to deliver on the ground. They'll want to define a programme that they do not understand how things are operated on the ground. ... CUs ... [are] better suited to work with those people on the ground and we ourselves, we are just doing the right thing and things that work and things that have value for money."

(NWASCO 17th June 2008.)

The government was too attached to the implementation process according to the Implementers, and even NWASCO of the National Authorities confirmed this. The ministries did not comment on this much but did admit they do not have enough resources for all the work required. Their main responsibility is to coordinate the policy development and therefore should not target their resources at implementation. Most of the other actors felt that the government is having too much control over the implementation but is not handling the leadership and coordination properly. If the resources are a problem, which they are, the ministries should concentrate their efforts on one single area, instead of spreading them out inefficiently.

As can be seen from the quotes above, the responsibilities regarding different tasks are quite unclear. The leadership taken by UNICEF is a start but they do not cover all the aspects. As was just pointed out, especially the implementation is seen as a very problematic area.

5.3.2 “There is a lot of grey areas where the implementation is not very clear”

Many things are to be done before the sanitation sector starts working without problems. Finding leadership may be one challenge but managing the implementation process with the vast number of actors will be difficult. With implementation it is important to define the exact roles of the actors. As can be seen from the quotes in the previous chapters, the actors have different opinions on who should be responsible. “National governments are responsible for determining the roles of national agencies and the appropriate roles of the public, private, and non-profit sectors in programme development, implementation, and service delivery” (Elledge 2003, 11). However, according to the respondents, it is not only the National Authorities who should pay attention to responsibilities in implementation issues.

“NGOs play a role in implementation and if they come to agreement with CUs they also can operate. ... And that’s what could be run by NGO on behalf of the community but reporting to CUs, final obligation to keep everything running is with the CUs. ... They [NGOs] are facilitating implementation ... I doubt whether it is a long lasting permanent solution if an NGO is involved without having a say as a partner. ... My recommendation is to partner with a state institution to implement, to be a partner to the CUs ... and this is where I see those international organisations coming, knowledge, concept, ideas.”

(GTZ 30th June 2008.)

“We are trying to learn from NGOs. Because NGOs came before things went in place, so they went to cover up the gap for the people. So they are already on the ground.”

(NWASCO 17th June 2008.)

It can be seen from these quotes, that the NGOs have a big role in implementation. However, they have not much say in the decision making process. Instead, they are acting as advisors and experts on the work done on the ground. While the MLGH

should be responsible for strategy development and only that, the implementation should be the responsibility of the CUs and the NGOs. The CUs, on the other hand, are to be responsible of the implementation *per se*, allowing the NGOs concentrate on their own work without having to worry about the overall picture – something that they do not always have the resources for.

The question of implementation does not, however, limit to the matter of roles and responsibilities. There is also the challenge of making the system ready for a smooth implementation.

“My impression is that funding is there but what is missing is finding some mechanism what is used to channel the money from the donors through the ministry of finance to the right places to implement projects. And we are far away from this now. There are some ideas and there are some under progression.”

(GTZ 30th June 2008.)

But changing the system can be extremely difficult. The decentralisation process, for instance, has been on going since 2004, but as can be noted from chapter 5.2.2, it is still not working as planned. Eventually, it comes down to a dialogue between policies and policy makers, projects and implementers.

“Regarding sanitation we are far away from implementation. There are a few pilots. ... It’s about developing a right concept. And I think the understanding to get the community involved is a big step forward.

(GTZ 30th June 2008.)

“Maybe you should take water supply, water resource management and put it to natural resources at the Ministry of Tourism and Environment. And then take the tourism off the environment, put it in commerce, that would be logic in the portfolios.”

(Danish Embassy 26th June 2008.)

It becomes clear, that in order to achieve a functioning system, changes in policy as well as in the actor network itself are required. MEWD does not have enough resources to deal with both water and energy, while MLGH is struggling with the number of responsibilities, sanitation being only one of them. The International Actors as well as the Implementers believe that the best solution would be to involve communities in the work, otherwise the even the policy changes will not make much difference.

5.3.3 “They simply don’t have the capacity”

Often it is the matter of material or the personnel gap that is holding the progress back (CPRWSSP 14th July 2008). The government's capacity to implement is low; they do not have the experience or the knowledge to address the problems. The project management often stops at implementation, because the ministries lack the resources as well as the hands on knowledge. However, at the same time the ministries hold on to their responsibilities instead of delegating the implementation to districts and the private sector. (Danish Embassy 26th June 2008; GTZ 30th June 2008.) Many decisions must be made by the minister or the president themselves which slows the process down. The detailed decisions are dealt on a too high level. (Antila 4th August 2008.) This could be fixed by a successful implementation of the decentralisation policy. Also the technology needed is often not available or it is simply too expensive to be used (Danish Embassy 26th June 2008).

“My experience with them is that they are trying hard and people there have the competency and they could need many more people but again it is a question of capacity. ... It is a political decision. ... I mean the number of people mirrors the importance of the sector or subsector within ministry. And the end it can be people being jealous having somebody next door ... I don’t think it’s a money issue.”

(GTZ 30th June 2008.)

The lack of specialised staff appears to be a question of something other than the lack of finances. The funding of the sanitation sector has increased tremendously over the years, so the financial resources as such are not the problem; the problem is both in funding as well as the allocation of finances (WaterAid2 30th June 2008).

“The pipedream that we can increase the capacity of these local facilities, it’s almost impossible, to get a person to go and work in the local authority under the current conditions, it’s very very difficult.”

(NWASCO1 17th June 2008.)

Also corruption keeps on being a serious threat to development. Many bodies simply do not have the capacity to utilise the money they are being given. (Danish Embassy 26th June 2008.) Even though corruption is one of the biggest challenges in the country, it is nowadays being fought vigorously and even some of the highest authorities have been caught and prosecuted (Antila 4th August 2008). Despite the fight, Zambia remains at a very low rank on the list composed by Transparency International (Transparency International 2008).

5.3.4 “Schools are a platform for change”

The importance of education supports the vision of integrating sanitation to social, health, environmental and other policies, or as portrayed in NUWSSP (Ministry of Local Government and Housing of Zambia 2008b), sector wide approach. The aim of both of these concepts is the same: to include actors from all levels and areas to work together. Education may seem secondary when speaking of sanitation, but the respondents felt differently. Also Elledge (2003, 11) sees education programmes as an important part of generating “demand and public support for efforts to expand sanitation services”.

Several respondents call out for change in the mindset of people, but this is the most difficult task of all. Many find that it is the easiest way to increase the hygiene education at schools in the areas with poor sanitation. However, some believe that the dangers of poor sanitation are widely known and that the main problem is not of the message itself, it is in the way the message is been communicated. People realise the importance of toilets but they will not invest on an improved one but will dig a traditional pit latrine instead. One option could be making raw materials cheaper and more available in the rural areas, because *“the people would be more than ready to change”*. (NWASCO1 17th June 2008.)

Whether or not people are aware of the importance of sanitation, there are still plenty of prevailing misconceptions. Since sanitation has been considered a private issue for such a long time, people do not want to talk about it. It is difficult to talk about a forbidden subject that has been taboo for such a long time. (MoH 14th July 2008.) This is why the work must start from the children and schools. Not only by hygiene education but also by building toilets at schools children are shown the importance of sanitation. Often so called “talking walls” are included in the toilet; paintings that teach about hygiene and how to use the facilities. (UNICEF 22nd July 2008.)

“Schools are a platform for change, meaning the young people get the concept they change faster, and they can be able to duplicate it when it actually goes back to community.”

(CPRWSSP 14th July 2008.)

Hygiene education at schools serves as a platform, but sanitation has also a reverse effect on the children’s education. Poor sanitation facilities often drive children, especially girls, out of school. Thusly, renewed sanitation facilities could at best keep children at in school.

“So we are saying if we improve sanitation in these areas, also the ghetto will feel much more comfortable because of these facilities, the environment is able to support facilities, therefore drop out rate and all this may be reduced, of course it is just an assumption but we feel those are some of the things we can actually improve in terms of sanitation.”

(CPRWSSP 14th July 2008.)

However, it is not only children to be reached. Sanitation training should find its way to tertiary education as well. Since engineers have little or no experience in sanitation and sewage and the educational institutions are struggling with funding and resources, there are practically no local sanitation experts. Most of the engineers working on improving sanitation are foreigners and unfamiliar with local ways. However, those few individuals who are working on sanitation often achieve very little due to lack of resources. For example, environmental health technicians working at district health

centres often find themselves unable to work after external funding seizures. (COWI 4th July 2008.)

“You have one very important constrain here in Zambia that you don’t have people with the right knowledge, or at least just a few and you need many more of those. It’s also true for water sector, it’s not only sanitation but there it becomes very obvious.”

(GTZ 30th June 2008.)

Also ministry personnel should be trained in facing the challenging aspects of their work. However, education takes time off from work, which slows the process down even more. The best option for Zambia would be to entice educated expatriates to return, but incentives would be required for this measure to succeed. (Antila 4th August 2008.) Meanwhile, the donors and NGOs attempt to provide expertise to the government.

5.3.5 “It is about ownership and sustainability and use”

“Local participation can be analysed in terms of two streams of initiatives, communication and resources: those which are top down, originating in government headquarters and penetrating towards and into the rural areas; and those which are bottom up, originating among the people in the rural areas and directed upwards into the government machine” (Chambers 2007, 87). The question of whether the communities should be included in decision making and how much responsibility can be given to them raises a great deal of discussion. Many see community participation as one ideal of good governance (CPRWSSP 14th July 2008), and community based approaches have been implemented in several projects.

“[...] we are applying to get the community involved in implementing the project, having this understanding that you have to get them involved to get it sustainable and running even when we are not there anymore and keep it running.”

(GTZ 30th June 2008.)

“In the integrated community development project they teach the locals that they are in charge, they give the cement for them to build the structure and they learn to take responsibility. They motivate people through committees.”

(DAPP 4th July 2008.)

The probably most successful projects are the CLTS and CBTS run by UNICEF and WaterAid among others. CLTS and CBTS, as already explained in chapter 4.2.3, rely on resources from communities. Barely subsidised, these projects involve the communities and give them a sense of ownership. When the people can decide which type of toilet they will build for themselves, they are more motivated to participate. CLTS and CBTS are slowly being approved by the government and they may very well be the means to achieve the MDGs (UNICEF 22nd July 2008). Using the resources of the communities also enhances the local economy, when small entrepreneurs get to provide work and materials for the building projects.

“So the community is heavily involved in the end and the decision is made on which technology they want, believing that if they get what they want and they have an understanding of what they get, that they will maintain it.”

(GTZ 30th June 2008.)

“We are not going to preach in the communities, let us just earmark issues that are critical and if you are saying hand washing is critical, let’s address that.”

(CPRWSSP 14th July 2008.)

Community involvement can be reached through hygiene education and many actors, from ministries to NGOs believe in that method. However, the question of how to keep the communities interested remains. Often there is not enough motivation within the community to maintain a toilet after it has been completed. A good method used much by the NGOs is to form a committee in the village to take care of sanitation. An official organ is a more stable way than relying on volunteers. (DAPP 4th July 2008.)

Community involvement is still a big issue in sanitation work, and will be discussed further in chapter 5.4 on financial issues.

5.3.6 “We have to understand that partnership needs partnership”

The harmonisation of aid according to the Paris Declaration has worked well and the government does have the ownership of many of the projects; in fact, often they are leading the donors to the right direction (Antila 4th August 2008). The National Sanitation Working Group has been an excellent tool to enhance cooperation between the actors. Meetings where donors, ministries and experts come together to finalise a policy they can all agree on is a big step forward indeed. It has been a great way to get the donors together and unify their action plans as well as allow the government to have a sense of ownership of the policy (COWI 4th July 2008). Especially the national authorities are thankful of the help and expertise provided by the NGOs (NWASCO2 17th June 2008; MLGH 14th July 2008). The NGOs themselves are also pleased with the increased cooperation amongst themselves (DAPP 4th July 2008, CARE Zambia 4th July 2008). Especially the NGO WASH Forum, active since summer of 2007, has brought more space for discussion and enabled better unification of projects.

“The NGO Forum facilitates the flow of information to the government because matters are dealt with together before informing the government. It is also good for joint planning and to unifying the projects, this has not happened before.”

(UNICEF 22nd July 2008.)

However, some have identified problems between the public institutions and NGOs. Some organisations seem determined on following their own plans and being unable to follow the minimum rules set by the national authorities.

“NGOs are notorious, they want to do their own thing. ... They are not very good, can’t tell them what to do.”

(NWASCO1 17th June 2008.)

Furthermore, some public institutions feel the NGOs might be portraying them in a negative way and refrain from cooperation. DTF is in the process of formulating a more unified concept, which all the NGOs *"will be able to pick the concept and apply that and just doing their own things"*. (NWASCO2 17th June 2008.) Their concept would allow the NGOs still room to work on their own but would create rules according to which they should operate.

"All the NGOs will come together and implement what we will formulate and we'll have the common focus and we'll be looking at the same type of technological options which will be acceptable to the people."

(NWASCO2 17th June 2008.)

However, even though some of the NGOs may have a mind of their own, you cannot force their hand. A problem occurred when the government planned to pass an NGO Bill to have more control over the NGOs, but the donors stepped up to protest: *"You cannot just control civil society like that"* (Danish Embassy 26th June 2008). Still, the NGOs operating on the sanitation sector seem to require a unified set of rules under which they should operate, and bearing that in mind DTF is doing very important work.

"It is a weakness of government, the government is supposed to have a mechanism for NGOs to, particularly in these specific sectors ... in terms of specific sector activities, like water, you need it to be organised because somebody has to take care of the facilities after the NGOs have left so there is need for some rules, minimum rules to be followed."

(NWASCO1 17th June 2008.)

However, providing rules and controlling the NGOs are two different matters altogether, and should not be confused with each other. The concept of good governance does not necessarily mean plain happy-go-lucky operations but clear and organised division of tasks and responsibilities, not to mention thorough communication between actors. The problem is that the idea of good governance is still somewhat new in Zambia and some methods pushed by donors are sometimes left unclear (CPRWSSP 14th July 2008). The NGOs, according to the International Actors, should be more

included by authorities in all aspects of the sector, starting from planning and decision making. Even though the NGOs are being heard by some authorities, and overall the Implementers feel as though they are able to contribute quite well, their position is apparently not as strong as it could be. On the whole, the NGOs still appear to be overlooked, if not as much as before.

“My opinion is that they [NGOs] are not very much heard so they are very silent often and this is where there is a problem. It is also very difficult for the governmental organisation to be heard by the partners.”

(GTZ 30th June 2008.)

There is still much to improve in the cooperation between the actors. The main problem concerns leadership as it has already been established in previous chapters. As there is no one to lead them, there is a lack of coordination between partners. The discussions at NSWG and NGO Forum are only on a small scale compared to what they ought to be and fail to turn into concrete actions. (LWSC 18th July 2008.) Another problem is that the ministries do not communicate with each other as well as they should. Projects between donors and ministries work well, still due to *“the polite lip service paid by the ministries”* instead of maintaining their ownership of the project (Danish Embassy 26th June 2008).

“The sanitation and hygiene promotion is kind of under the Ministry of Health but all the hardware stuff is lost within the Ministry of Local Government and Housing, and as far as we can tell, they don’t really talk to each other that much, so that’s the other side of it, how can we get more joint work going on.”

(WaterAid2 30th June 2008.)

However, some projects involving several ministries seem to exert more effort due to lack of communication, which often requires the donors to be proactive and allow quick changes to take place (Antila 4th August 2008). Even though the ministries are urged to take charge, the leadership of many projects is still often left lingering.

The draft of NUWSSP (Ministry of Local Government and Housing of Zambia 2008b) describes, however, a Programme Steering Committee to be responsible for the implementation of the programme. This committee would have members from all the ministries involved as well as a representative of the lead donor of the sector. Both national and local authorities would be represented. In addition to this, several advisory groups and committees would be formed by both the authorities and donors but also the NGOs and other advisors would be included into the groups. If successful, the new programme might enhance cooperation and help steer sanitation projects into the same direction. It is possible that without the seamless cooperation of different actors, the changes may not succeed.

“They [donors] are cooperating with the government. Let them cooperate more and more with NGOs. I know public institutions don’t want NGOs at all because they expose them, when they are stalling and then they expose them and say look this is why we don’t want NGOs for that. But if the donor countries can insist and get on board some NGOs in this we may have some difference. But it’s not so easy.”

(NWASCO 17th June 2008.)

Fortunately, many actors are supporting community based development, which encourages the communities themselves to take ownership over their projects. Once the community based or led projects become more common (CLTS by UNICEF and CBTS by WaterAid) and the communities provide more and more of the work and materials, the problem of subsidies may also become less significant. (GTZ 30th June 2008.)

5.4 Financial constraints

Many issues already mentioned under governance and institutional issues could easily fit under this heading as well. Financial issues are a big part of sanitation development. Capacity is often dependant on allocation of money, which in turn is related to the duality between water and sanitation (see chapters 5.2.5 and 5.3.3, for instance). Also the entire question of decentralisation includes financial issues, as the point is to direct some resources to the districts from the central government, and all these aspects can be

traced back to the lack of political will. I will not, however, repeat myself, and will thus concentrate in this chapter on an issue raised by the interviewees but which so far has not been mentioned.

Creating the right economic incentives is often the most efficient way to find appropriate solutions. Economic measures can be used to promote proper sanitation attitudes and behaviour changes. They may include user charges or tariffs, which “are charges which households and enterprises pay in exchange for the removal of human excreta and wastewater” (Elledge 2003, 11). Fines can be “imposed on enterprises and people for unsafe disposal, emissions and/or risky hygiene behaviours and practices, which are a danger to people and to the environment” (Elledge 2003, 11). One more option is subsidies, which “are allocations in cash or kind to communities and households for establishing recommended types of sanitation facilities or services” (Elledge 2003, 11).

Poverty is the principal impediment to increasing access to sanitation. The poor simply do not have the resources, the skills or the materials to improve their sanitation facilities without support. (Lenton 2005, 69.) The question of how to fund national improvements has been troubling decision-makers for a long time. Overall, it comes down to allocation of finances, which in turn is an ongoing process together with decentralisation (Tipping *et al.* 2005, 59). Large-scale participatory programmes are vulnerable to changes in their institutional and political environment and to the rules that govern them. Financial arrangements can be the cause of some of the most serious threats. One aspect dividing opinion in the sanitation work is subsidies: some seem to think there is not enough subsidisation or it is not distributed well or equally enough, whereas others find subsidies only slowing down the development by inhibiting self-help. (Chambers 2005, 145.)

“I think UNICEF has come on hard left, no subsidies, CLTS pilots, and then other donors are like you have to subsidise. ... [Y]ou should subsidise hardware ... so people don't get them for free but they have to get a subsidised price.”

(WaterAid2 30th June 2008.)

Urban sanitation has been well subsidised by the government when building sewage systems in the cities. However, the rural and peri-urban populations unreachable by sewage have failed to receive similar subsidies for their sanitation. (COWI 4th July 2008; NWASCO1 17th June 2008.) The government does offer fixed term solutions for emptying toilets in peri-urban areas but these services are only for those who build a new house with a toilet (CARE Zambia 4th July 2008).

"It depends. When you talk about subsidies, there are those people who could never afford a proper latrine especially in the rural areas ... Government is saying build with subsidies but the donors are saying it should be an individual responsibility. "

(WaterAid1 30th June 2008.)

"We [the bilateral donors in the sanitation sector] don't subsidise household sanitation, and that is always debatable, because you can take the view that this is so important it doesn't matter with these strict politics, but you can also look at it from the other technical aspect, we know the politics are not working so you have to be responsible for your own life."

(Danish Embassy 26th June 2008.)

"The government would refuse to subsidise that simple cheap thing which would cost less than five dollars to supply rural person and they will tell you all sorts of things, no why should we provide for them? How much have they subsidised the urban people by putting sewer lines everywhere, no one contributed to the sewer lines and water pipes, they are paying for the current costs but the initial capital cost the government subsidised and paid for that. So then the question is why can't they do that for the rural areas."

(NWASCO1 17th June 2008.)

Others in turn find that subsidies merely disturb the consistency which is needed for the projects. They find that ownership and sustainability are the key elements of development aid. Subsidies may also hurt people's pride, whereas unsubsidised projects

can create a strong message if realised. (UNICEF 22nd July 2008.) Both UNICEF's CLTS, WaterAid's CBTS and DAPP's Integrated Community Development project teach locals to take responsibility. This approach motivates people and creates a feeling of accomplishment rather than being helped. (DAPP 4th July 2008.) Fortunately the newly refined policies should unify also the opinions on subsidies (COWI 4th July 2008).

“Consistency is important in this, and for some reason people still want to give subsidies. UNICEF does not, because it is about ownership and sustainability and use. It has a strong message when the importance is realised and people have pride.”

(UNICEF 22nd July 2008.)

It is one thing to provide toilets per household if the family is doing the work themselves, but problems occur when communal facilities are built. Firstly, the problem of land ownership emerges. Not everyone wants a public toilet on their land and there may be some difficulties with getting permissions for construction. The second problem is of the maintenance. It is easier to maintain your own toilet than public facilities. (LWSC 18th July 2008.) Some communities have fixed the problem by locking the public toilets so they cannot be wrongly used. This, however, makes the toilet useless and is not a permanent solution. (MoH 14th July 2008.)

5.5 Technical challenges

When resources diminish, the area that usually feels the cut back the most is the infrastructure. Poor maintenance of the sanitation facilities, from wastewater management to toilets, leads to a system running over its capacity. It was pointed out by many that the current infrastructure is unable to support wide scale improvement of sanitation. Water and sanitation services, such as transportation and buildings, are necessary for cities with millions of inhabitants, like Lusaka. These basic services are not dependant on the economic development of the people but they are required by everyone. With poor infrastructure in place, it becomes difficult or even impossible to provide the people clean drinking water, food, shelter and medical care. These services

are cornerstones of as well as the major challenges to economic development. (Hukka & Katko 2003, 12.) Also ecological settings need to be taken into account when planning the expansion of sanitation services. It must be remembered that groundwater protection is a priority in water-stressed areas, such as in many areas in Zambia. (Lenton *et al.* 2005, 77.)

Only few local governments have a clearly defined urban development policy, let alone a policy for informal settlements (Tipping *et al.* 2005, 49). Zambian cities generally have sewage systems in place, but they by no means have enough coverage or are maintained properly. The increase in urban population density has raised a new issue on sanitation: sludge management. When the cities' sewage systems were built, there was so much space and such a low population density that sludge management was not considered important. Now the cities are burdened with inadequate sewage treatment plants which cannot cope with demand. (COWI 4th July 2008; NGO WASH Forum 2008, 11.) The need for a proper plan is the greatest especially in the unplanned peri-urban areas, while the cities require the most a system with a better capacity.

“The problem is not big because the areas are planned, that is with the local areas, but the problem you may find is that the system is now under capacity. ... The population are about to increase ... so now these pipes are blocking from time to time so that is a big challenge which is in the local area. But in the peri-urban areas they don't have enough toilets, most of them, they just go to bush facility, the flying toilet ... so the urban problem is more serious.”

(NWASCO2 17th June 2008.)

Since sewage system management was handed over from city councils to CUs, everyday service become a business. As the sewage companies work on several areas and there are not too many customers on drainage, it is not commercially attractive, unlike unsludging septic tanks in the cities. There is no proper policy on drainage, no plan to implement, or the CUs are on their own, unable or unwilling to change the situation. (COWI 4th July 2008.) As often the case, the solution lies with the problem. With a better management of infrastructure, proper leadership and sharing of

responsibilities the situation could be improved relatively quickly (LWSC 18th July 2008).

“Engineers have very little expertise in sanitation and sewage treatment. Sludge management has never been an issue because there has always been bush. Density of population is changing this. Educational institutions should be responding but they are struggling with the lack of funding and resources in tertiary education. There has been no exposure to sanitation technology. The problem is where to find local experts, often there are none.”

(COWI 4th July 2008.)

The water contamination is not as much of a problem in rural areas as it is close to urban settlements. These rural people live around vast lands and forests, and have survived well so far. Building facilities in the rural areas can turn out challenging merely because it is difficult to acquire materials. Furthermore, rural settlements have rarely permanent latrines but they change the location frequently and bury their waste. However, it should not be assumed that rural areas have no need for sanitation facilities. Rural dwellers are often dependant on only one water source and if this becomes contaminated, they have no means of cleansing it.

6 KEEPING UP WITH THE CHANGE

To answer the question presented in chapter 1, *how to move on from pilots on to long term projects?* I will gather points already discussed in this paper and discuss the key elements further. Eventually, I will present some concrete actions for the different actors to improve sanitation in Zambia.

The actors' views indicate that there is indeed an on going creation process towards a functioning network society in Zambia. The practices of good governance are being acknowledged more and the governance in both national and local level is forming complex actor networks. The policies are being transformed into more unified ones with the help of various experts and actors of different status. Also the goal of policy integration in sanitation sector should motivate not only health professionals but other experts as well into developing the sanitation sector. Both social and environmental aspects as well as authorities are to be included into the policymaking in the sector.

It is being acknowledged by nearly all the actors, that sanitation affects several areas of society. It is not merely about housing and convenience for people, but first and foremost it is about health of the population and the state of the environment. It is about community development and water management. It is about sustainable investments and capacity management. The actors most active in the sector acknowledge this, which indicates a brighter future.

However, several problem areas remain. As mentioned earlier, Zambian society and the system of government is going through a change as the decentralisation policy is going through implementation and the practices of good governance are becoming more common. The actors are facing conflicts especially in the distribution of power but also the entire process of policymaking has need for improvement.

6.1 Problems with governance

As identified by Lenton *et al.* (2005) as well as Tipping *et al.* (2005), the problems with governance are one of the main impediments of sanitation sector. The ever-changing

political system makes it challenging to create a lasting progress especially since the investments may not yield results during one term (Lenton *et al.* 2005, 64). While the problems in the sanitation sector are indeed many and the conditions tend to change sometimes even quite rapidly, the key for solving the sanitation crisis would “urgently require significant paradigm shifts towards integrated water resource management and the improvement of urban governance” (Tipping *et al.* 2007, 50). The interviews conducted for this research support the view.

The most striking difference of opinion in the governance discourse was found in decentralisation. All the other actors commented on the poorly functioning decentralisation process while National Authorities did not comment on the actual process. The International Actors and the Implementers emphasised also the importance of the process being completed.

Everyone recognised that the national policies were unfit to serve the nation’s needs. However, the preparation of new policies and programmes was seen as a positive matter and nearly everyone expressed their optimism. A slight pessimistic attitude could be detected from the Implementers: they were often the ones with the least say about the matter and were criticising the progress saying the Sanitation Working Group was working too slow.

Relating to capacity and the poor definitions, all actors admitted the problems. It seemed that National Authorities emphasised the difficulty of the process of redefining adequate sanitation while the other groups concentrated on simply criticising the current state of the definitions. True enough, the National Authorities are in charge of definitions but they are also the ones with the problems of capacity and especially human resources. Contrary to what the other actors claimed, it is not merely up to the political will to get things done. Yet, it was very positive to see that no one brought up corruption as a serious problem in the sanitation sector.

6.1.1 Further on decentralisation

The slow progress of the decentralisation process presents a problem in several ways. Firstly, the cooperation between different actors remains difficult and public

participation is challenging to arrange. Furthermore, the ministries simply do not have the capacity to plan, develop *and* implement everything that is necessary. Once the ministries meet their limits, the progress becomes even slower and long-term goals are often put aside in order to achieve at least the short term goals. In terms of sanitation, this means more pit latrines instead of permanent toilet facilities and functioning wastewater management systems.

The challenge of decentralisation comes down to the matter of participation and the sense of ownership. When government experts maintain power over implementation, little room is left for any meaningful civic participation, which would be vital in order to implement successful sanitation projects. The dilemma between citizens and experts presents a conflict. When the experts possess the knowledge they consider to be relevant, civic participation is not needed other than for physical labour. However, participation is often limited by the lack of knowledge. (Fischer 2002, 9-10.) The dilemma of knowledge and civic participation can be also applied to district participation. When the districts do not have enough knowledge on the matter at hand, they feel more comfortable to allow the government to deal with the sanitation issue. This results in less work for district employees and a work overload for the government workers (CPRWSSP 14th July 2008).

It is arguable that the difference in opinion can be traced to the different actor-spaces. There is a difference not only with the geographical location of the actors, but also of ideologies. For the districts, it is difficult to affect the decision making processes of the centralised government because of the great distances between them. The actor may be able to make a difference over distance but this is usually aided by other actors within the network. Eventually, the matter of actor-space is also a matter of power relations. (Murdoch & Marsden 1995, 372.) It can be assumed that the political elite of the society is in control of the decision-making process. However, the actor network is not a structure as such, but a dynamic system. Some networks hold more stable power relations while in other cases actors are able to form the power equations by themselves. (Peltola 2001, 196.) In the Zambian decentralisation process, change is already in progress, which demonstrates the process of change in the country's power structure.

One dilemma represented by the practical application of decentralisation can be distinguished thusly: “the horizontal distribution of power along different realms and functional subsystems and the vertical distribution of power along different levels of government” (Voss *et al* 2007, 198). In order for sanitation development to progress, the horizontal distribution of power must be high. The ministries must cooperate and they need to work together with the other actors to have a strong enough effect. Vertical distribution of power refers to interdependencies of steering activities at different levels of governance, such as policy making at the level of the national government, regional states and local municipalities (Voss *et al* 2007, 198-199). In the case of Zambia, the decentralisation process is an ideal way to remedy the highly vertical power distribution. The success of the decentralisation process reflects not only to governance but also to the conditions of poor people living in rural areas.

Finally, one big issue identified by the actors is the problem of power distribution in general. While all the parties acknowledge the importance of public participation to sanitation projects, the government finds it difficult to let go of the responsibility. The decentralisation process was launched to allow the districts more power in decision making and the implementation of projects. The situation described here is once again a good example of a loose issue network, which is not organised hierarchically (Peltola 2001, 195). Power relations, when viewed in the light of the practice theory, show the state of the actors within the network. As Hajer & Wagenaar (2003, 20) point out, the practice theory suggests that actors learn of the world through the shared processes of public discourse. Thus, the concept of practice stresses the value of communication. While communication between actors is functional and somewhat direct, it is easier for them to test their views and knowledge on the matters at hand. In order to create a new functional policy the actors need to engage in discussions over the matter. It was pointed out by some of the respondents, that not all the parties attend the meetings of the NSWG or the NGO Forum. This hinders the discussion over a particular subject and even though it may speed up the process, the final result may be dysfunctional due to insufficient planning.

6.1.2 More observations on governance

The NSWG is a great example of an issue network, where the actors have come together around a single issue (Peltola 2001, 194). The group works together towards a common goal but the participants may have different interests. Policy making is use of power, and those who can affect the policy are concretely using their power in the group. Compromises are to be expected but it is up to the relationships between the actors whether or not the policy will be finished and implemented on schedule.

Political will and power struggles are the factors keeping decentralisation from happening. With power, the question is not of quantity but of the number of actors involved in its composition. Power relations are dependant on actors and how they cooperate. To use power, an actor must dictate to the others. This just shows how power in fact ties actors together, and it is up to the strength of the actors involved whether the network is unbalanced or not. (Murdoch & Marsden 1995, 372.) It is much up to the know-how of the policymakers which issues will be raised up in the new policy. Hajer and Wagenaar (2003, 15) quote Fischer and Forester (1993, 2-3) when referring to policy and planning arguments as practical productions. By evaluating the policymaker's arguments one can also evaluate "their partiality, their selective framing of the issues at hand ... their political timeliness ... and more" (Hajer & Wagenaar 2003, 15). The draft of NUWSSP does seem quite thorough and follows the comments made by group members. Especially delightful is the consideration of different policies, such as climate, HIV/AIDS and environmental effects of sanitation. (Ministry of Local Government and Housing of Zambia 2008b.) However, capacity does not always support the good intentions.

The dilemma is about capacity building. Especially human resources are lacking in several areas of the sanitation sector in Zambia, as could be noted from the interviews. The concept is old but especially "human capital management" which has been erroneous not only in developing countries. "Manpower planning" attempted since the 1960s has often proven an unwise choice of strategy with poor investments being made. (Johnston 1998, 43.) There is a lack of well educated staff and experts with local knowledge (COWI 4th July 2008) while too much effort was put into technical training of the staff (Johnston 1998, 43). It has been difficult to anticipate the future needs in the

past and now human resources are decreasing. Resources are always scarce and with several actors involved the money and power are differently distributed between them. This may lead to a conflict which again disturbs the pursuit of the goal, which is often difficult enough with a loose actor network. (Hajer & Wagenaar 2003, 21.) The resource management is tied with power and the equation is never easily played out.

Eventually, the conflict between water and sanitation becomes a key issue. As long as water and sanitation are under the same heading, they should be treated as equals. However, as the respondents said, water keeps getting more attention, resources and aid than sanitation. Sanitation is, though, a critical part of water management and should be treated as such. There is not much point to improve the source of the water supply if the water will get contaminated at some point due to inadequate sanitation. This is not a predicament of the government alone, even though MLGH and MEWD are mainly responsible for water and sanitation. In fact, the two ministries are a part of the problem, because it means water and sanitation are divided between them. It remains problematic as the two ministries do not communicate as actively about the matter as they probably should (WaterAid2 30th June 2008).

The issue of water and sanitation requires attention from donors and NGOs, as well. As the graphs by WaterAid show (see page 25), the aid given is not divided equally between the different sectors or even the diseases that are being fought against. The work done against HIV/AIDS receives considerably more money than the work against diarrhoea, even though they cause as many deaths annually. Even though the donors have organised it so, that one donor is active in approximately three different sectors and the sanitation sector is well looked after, the aid given for water continues to be close to 90 % leaving sanitation with the mere 10 % (WaterAid2 30th June 2008). Also the NGOs doing sanitation work are few and they need more resources to tackle the problem concretely.

The issues mentioned here lay a basis for one more dilemma. If policy integration is to take place also in the sanitation sector, it may be difficult to address some of the issues already mentioned here. Policy integration may make the coordination of the policies easier, but it can also confuse the political field and divert the attention from the actual political goals (Mickwitz 2006, 57). The relationship of water and sanitation is unlikely

to change if the policy sectors are to be united, not to mention when other sectors are increasingly linked to sanitation. Succeeded decentralisation will distribute power more widely from the central government to the districts but the increased range of actors working on sanitation might confuse the roles and leadership positions even further. Furthermore, the increase in actors from different backgrounds will affect the practices used for solving issues. New practices will emerge and new actor-spaces will need to be drawn. Thus it is important to first recognise the root cause for the situation being what it is and only after that work on reforms and other solutions. Otherwise new possibilities and methods might change the equation in ways, but the core problems would remain. This observation is merely to point out that solving one issue may not be enough but one solution creates often many new problems. The actors involved in the process need to be aware of this. The motive for the policy integration must come from the desire to change the current conditions in the sanitation sector, not merely for bureaucratic reasons (Mickwitz 2006, 58).

6.2 Development aid as a solution

Compared to governance, development aid was easier for the actors to agree upon. Everyone was pleased to see the level of commitment in the cooperation: the NGOs having their own area, the NGO WASH Forum, to share their views. The Implementers are the experts on sanitation, while the International Actors are mostly facilitating the process with the help of their own experts. The ministries do not have enough resources but through the working groups it is possible to benefit from the other actors' expertise. Cooperation is benefiting all the parties involved.

It seemed that the year of sanitation and the Millennium Development Goals had increased the enthusiasm to work on sanitation but some actors, especially the donors, feared that the visibility of sanitation might decrease after the year of sanitation is over. It is likely, however, that the work on sanitation will continue as planned. Several interviewees, especially the ones working on the new programmes, felt that the change was coming regardless of the MDGs or the year of sanitation. The actors in this network have reached a consensus on a common goal, to improve sanitation, and they are attempting to achieve their goal. It is now up to the actors who have power over the

matter. “Those who are powerful are ... those who are able to enrol, convince and enlist other into associations on terms which allow these initial actors to ‘represent’ all the others” (Murdoch & Marsden 1995, 372). If an actor or actors are able to take the lead and guide development into a certain direction, progress will be made. However, it is vital to recognise the difference between leadership required in the projects and the despotic use of power, which can be used to cut the corners of democracy. Yet, with a tight actor network such as the NGO WASH Forum involved in the discourse, it is unlikely that parties will be left completely without say in the matter.

This may not be easy, as the development projects include actors from both Zambia and the rest of the world. Actor-spaces are composed of both local and non-local resources, and the networks are facing the challenge of operating with these conditions. Actors formulate concrete goals and a means to achieve them, and this process involves actors in concrete situations, actor-spaces, enrolling other actors to their cause. (Murdoch & Marsden 1995, 377.) In development aid, the concept of actor-spaces becomes an interesting one, because the actors involved have quite a different idea of their causes and goals, and means to achieve them. International Actors have different views than National Authorities, for instance, and they have different practices. Practices integrate the actors in an “‘activity system’ in which social, individual and material aspects are interdependent” (Hajer & Wagenaar 2003, 20). In international networks the actors have different cultural and social background which in turn affects the practices. One of the greatest challenges of development aid is to find a common means to achieve common goals – and to define them.

NGOs and donors supporting the government with sanitation do not always share the same views with the government. Before this was a problem: the governments of developing countries often complied with the suggestions of the donor countries, no matter what they thought was best. Today, the government of Zambia has acquired ownership over the development projects and has learned how to utilise the donors as a resource. However, there are still disagreements on certain policies, which is one reason why the national policies on sanitation are taking so long to be completed. (Danish Embassy 26th June 2008.) Again, the question of actors taking on different practices makes development issues complicated. The renewed practices offer new methods and ways to act (Peltola 2007, 60) but they also make the sector more complicated and

observe the power relations between actors, for instance: “*They [NGOs] are not very good, can’t tell them what to do*” (NWASCO1 17th June 2008).

The NGOs do present a different kind of problem. The government is often detached from the real situation on the ground level. For this, they need to consult the true experts in the field: the NGOs. However, even though the NGOs are participating in the National Sanitation Working Group, they often feel as though they are not being heard. In fact, not long ago the Zambian government wished to draw an NGO Bill to control the actions and knowledge of civil society. This was prevented by protests from the donor side, but the attitude towards the NGOs remains the same.

As pointed out by Mackenzie (1992, 26), in order to facilitate local initiative the government should aim at empowering the communities responsible for their development. This notwithstanding, the government must also listen to the communities. An assumption that is common to many African countries is that local empowerment is “of no consequence to those in power at the level of the state” (*ibid.* 27). This being the case, it is important to remind also the government of the importance of community based work; however, this requires some political will from the government to let go.

But, as always, it is a question of practices. It depends on the political narratives about social issues, and the actors’ views on these (Hajer & Wagenaar 2003, 20). During the interviews it became clear, that actors with a background of working on the ground level felt that the locals should have ownership and responsibility over the projects. The more distant from the ground level the interviewees became, the more stress did they put on subsidies. This, however, does not mean that the ones with some hands on experience have the right answer to the question of subsidies. People learn about the world through public discourse, and thus the concept of practice stresses communication – as well as value. Values are formed based on experiences and each actor has their own values, and therefore practices. Values tell the actor where to pay attention to and what to do in concrete situations and a consensus can be reached only through discussion. (Hajer & Wagenaar 2003, 20.) The actors from different cultures and backgrounds may not share the same values, and thus their practices may differ as well. Development aid is surrounded by continuous discourse with numerous actors taking part in it. In fact,

actor relationships which mediate all development processes are more and more part of development discourse (Chambers 2005, 199).

6.3 Cooperation between actors

The preconditions for development of the sanitation sector, as recognised by Tipping *et al.* (2005, 50) should be allowing “all stakeholders to articulate their needs in local level processes that feed up to higher levels for consideration”. This, as noted in the previous chapter, requires a successful decentralisation process in order to direct the resources as well as the power of decision to the lower levels. However, the government which seems to be reluctant to relinquish the power it has over the districts should also envision the benefits it could gain from the change. Instead of power, the government could be the empowering factor in the equation by facilitating and supporting the districts. This would not only benefit the districts and the so far uncontrolled sanitation projects, but also relieve stress from the government and the ministries. (Chambers 2005, 207.)

In another concept, the government can be seen as the “lower level” of power. In terms of development aid donors often seem to possess power over the receiving governments. Even though the harmonisation process of the Paris Declaration has been emphasised to prevent this, old habits die hard and thus relations remain unequal to some extent. Funders have to recognise the disempowering qualities of their demands and learn to behave differently. This means paying increasing attention towards working for combinations of restraint, respect and trust, while the recipients need to complement the action by proactive autonomy, responsibility and trustworthiness. If cooperation can be reached with less control, lower transaction costs, and more trust and trustworthiness, more will be done and it will be done better. It is through a synergy of reducing demands, levelling power relations and taking responsibility of action that the administrative capacity can most effectively be enhanced. (Chambers 2005, 50-51.)

Cooperation, however, does not limit itself to power distribution between different levels. It is equally as much about partnerships, which are often viewed as the driving force for sustainable development (Tipping *et al.* 2005, 53). Partnerships between

national authorities, international actors, civil society and communities have been increasingly promoted, and also integration of, for instance, economic, environmental and social aspects of development – as mentioned earlier in this paper – has been thought of as one of the key elements for a holistic approach. Active participation by all sectors of society is required when targeting a particular challenge (Tipping *et al.* 2005, 53), such as sanitation. Partnership, as any cooperation, is, again, much ado about power relations – most importantly empowerment. Whether it is donors and recipients, central government and district councils or NGOs and local people, enabling the “weaker” actor to participate in decision making and implementation supports action in all levels, by all actors, and by all means. Terms such as equity and accountability have been linked with enabling participation; terms, which also play a role in the overall picture of social development (Tipping *et al.* 2005, 56).

Empowerment, participation and the goals of social development notwithstanding, the problem presented by inadequate sanitation will not change with the help of noble ideologies. Eventually, it does not matter who makes the decision and who provides the service as long as the work is done. It can be noted that the interviewees agreed with Tipping *et al.* 2005, 56) and that actions in Zambia are showing the potential of reaching the goals: “a truly participatory approach, including all the relevant stakeholders and possibly lead/governed/convened by government, might be the best approach” to tackle the problem. The interviews revealed some issues, such as lack of leadership and insufficient communication between the actors, but these issues can be dealt with only after they have been identified. The challenge presented by sanitation and the threats it is causing to public health, environment and entire societies is, in short, “a key governance challenge” (Tipping *et al.* 2005, 56).

6.4 Potential solutions

After discussing the challenges at hand, it is only appropriate to make a few recommendations concerning the further actions of the actors involved. The following thoughts are not unique and were voiced out by some of the respondents as well as myself, but they offer some views of what could actually be done. In the following, I have divided the actors into four groups: the three which I already used in chapter 5

with the addition of the group *Communities*, which was not represented in the gathered empirical data but is still a very important actor in the sanitation sector on the whole.

6.4.1 National Authorities

Since it appears that the administrative capacity of the government is a severe constraint on development, there would seem to be an a priori case for subjecting it to techniques which use its resources carefully and sparingly. However, this has not been the case. The technical reason comes down to the same issue as sanitation work on the whole – measurement. Bureaucratic performance is not measurable by mere number of personnel but also by “organizational, motivational, social and economic variables which are difficult to quantify” (Chambers 2005, 30). It is apparent that since the development of sanitation sector is being monitored, the keenest interest is being paid to aspects which are measured by international institutions such as OECD/DAC and WHO. This means mainly coverage of sanitation facilities and the amount of money and other resources invested in the work, whereas more abstract concepts such as the aforementioned performance is more difficult to measure – and thus more tempting to be ignored (see also chapter 3.1.4).

The government’s role in the improvement of sanitation is very important. The national policies are issued from the ministry level which is why the ministries need to work coherently towards the same goal. The different ministries have to improve the communication between the ministries and they need to be encouraged to start shared projects with the other national authorities as much as they are starting them with donors and NGOs. Especially MLGH and MEWD play a key role in communication. They are in charge of areas which are often put together as one and yet the ministries act as two different entities. More active participation in the NSWG but also frequent discussions between the two could improve communication. Obviously, the matter comes down to resources which should be optimised both in the water department as well as in sanitation.

National Authorities should also “assume responsibility for the overall strategic planning for sanitation services ... and recommit to their role as a regulator of services, promoting innovation an expansion of access while also protecting both citizens and the

environment” (Lenton *et al.* 2005, 86). National Authorities have to learn to understand the importance of sanitation. As said by many interviewees, sanitation is not considered important or it is still a taboo subject (MoH 14th July 2008). Good intentions are not good enough either; what is needed is the political will to implement. Redefining adequate sanitation is one step forward but it is not enough. Also the law needs to take sanitation into account more in depth than it has done before. Even if sanitation is considered to be an individual responsibility, which it may be in practice, it should not be treated as such. The law needs to state the methods of safe sanitation so that lavatories and waste management function properly and are up to current standards. The improvement of the facilities should not be the responsibility of the CUs alone, but the government needs to be a part of the development, at least observing.

Good governance is a key aspect also in sanitation, and shifts in the use of public resources are in order (Lenton *et al.* 2005, 86). The National Authorities must continue fighting corruption on all levels. They also should encourage other actors to participate more in the implementation of sanitation projects. The decentralisation process must be completed, the sooner the better, in order to get the districts more involved. Investments for wastewater treatment plants as well as sanitary facilities in schools are to be taken care of by the National Authorities, while it is to be remembered that at the community level the public funds are probably best used in marketing and promotion of sanitation and hygiene (Lenton *et al.* 2005, 86). Civic participation should be encouraged and assisted in the communities. As the decentralisation process requires the attention of several parties on different levels, it is a complicated issue to manage, but quick implementation and proper management would ease the process. Again, it is a question of resources at the ministry level. Even though privatisation may be a good option especially in wastewater treatment, the government is the one in charge of it: the CUs are to follow the policies drawn by the government, and they should be monitored regularly. Also the decentralisation process should be taken into account: even though the government is the one in charge, the districts should have the authority over certain issues relevant to them. The central government, no matter how important its role is, ought to be more of a facilitator than an actual implementer.

In order to improve sanitation in the country, the government and the ministries need to be aware of the on going development. It is important to keep track of the progress of

the different projects as well as the overall situation in the country. Following the country reports by WHO, OECD and UN as well as concentrating on the FNDP of Zambia it is possible to stay up to date on the current situation. The MDGs and the *Zambian Vision 2030* must not be forgotten, as they are a crucial part of the development of the *Zambian sanitation sector*.

6.4.2 Implementers

The NGOs are the force driving the sanitation projects on the ground. They have the expertise and know-how to implement projects – what is lacking is funding and resources. The NGOs are already working with each other, but the cooperation is very limited. The small organisations often work in remote areas making networking with other organisations difficult. Nevertheless, the organisations can find local NGOs and CBOs, private companies and district councils to work with. It is important to reach actors from all the areas of the sector.

As NGOs have an important role as educators, they have the opportunity to affect the attitudes of the people, both in the communities and in the authority level. Sanitation remains an uncomfortable topic to discuss so a radical change in mindsets is often required. NGOs can help to make this happen. UNICEF among others is already displaying progress in its CLTS approach. Presenting things as they are, without embarrassment and awkwardness, will eventually transform the question of sanitation from taboo into an open discussion about health and safety of the people and environment. It appears that CLTS and CBTS are good methods to be developed even further, and research is required to learn how to make the method work even more efficiently.

It is also crucial to remember that the NGOs are working for the people. Whether they are building community facilities or advising ministerial people that they need to remember that the projects are not theirs alone. Both the authorities as well as the communities need to feel the sense of ownership of the projects in order to commit them. The NGOs should be heard when developing new strategies but communication goes also the other way. The NGOs, especially the international ones, need to pay attention to the national policies and needs rather than working on their own.

Cooperation is, again, the key word, as the local councils and authorities ought to be willing and able to advise them on their projects. NGOs should be advised and encouraged to contact district councils for support and information of the area they are operating in. This way the actors can come together and even new contacts can be formed. This in turn can increase the number of new opportunities and exchange of useful practices among all the actors. As mentioned by the interviewees, the NGOs are the key element working on the ground and with the people, and they can act as the connecting link between the other actors.

6.4.3 International Actors

Donors have a big influence over the government they work with. Even if the cooperation seems to be going smoothly, some hierarchy may be detected. Even if the International Actors do not agree with the government, they need to remember that the government is eventually the one making the decisions. Constructive conversations and negotiations help in reaching agreement. As the Paris Declaration decrees, the government of the developing country should still be able to have the ownership of the projects; the International Actors are there simply to assist and advise them. The International Actors must effectively coordinate their actions without forgetting harmonisation of procedures and joint programs (Lenton *et al.* 2005, 158).

It is futile to require adequate resources from the recipient if the International Actor does not have “the organisational capacity, mandate, staffing and resources needed to carry out their functions” (Lenton *et al.* 2005, 157). Only with sufficient capacity can the International Actors assist Zambia in preparation for national strategies in order to achieve the MDGs in sanitation. As far as cooperation goes, the working groups are a step closer to success, but resource allocation requires still more work on both sides. (Lenton *et al.* 2005, 157-158.) It is possible that a donor may fear that to draw attention to limited administrative capacity, for instance, would be offensive, and be taken as implying that the recipient country lacks the ability to handle its affairs; and for a recipient to refer to it might be regarded as damaging to national pride (Chambers 2005, 30-31). However, it is important to get past these difficulties and discuss issues using the correct terms. Problems must be faced diplomatically, which is done most conveniently when the parties in question are dealing with the same person or persons

throughout the process. At that point, it is not two governments negotiating but two colleagues trying to find a solution together.

As the International Actors have better resources and expertise, they are ideal for assisting the National Authorities in drafting the national policies on sanitation and maintaining or reaching an adequate level of good governance. They can also support the decentralisation process to make it proceed faster. Eventually, the International Actors, the donors and the experts of UNICEF alike, are there to lead by example to the developing country and make sure the same mistakes are not repeated twice. When sanitation is in question, also the attitudes can be changed by showing example. This means, however, that also the International Actors must bear in mind the importance of sanitation – even after the year of sanitation is over.

6.4.4 Communities

The Communities were added in this listing because of their significance in the improvement of sanitation. Since several actors find that the Communities are responsible for their own household sanitation, it is up to the local people to make it work. This cannot be achieved without hard work.

The local people must, as well as the government, have the ownership over the project in their community. Without ownership there is no participation and without participation the work suffers greatly (Fischer 2002). Through programmes like CLTS it is to be noted that when the people participate in their own projects, their mindsets change and soon they will start developing the projects even further. (Harvey & Mukosha 2008.)

In order for change in mindsets to take place, the communities need to be active and willing for it to happen. Change cannot be forced on them and participation is required. Many NGOs operate with village councils or groups formed for the specific purpose of improving water and sanitation. When successful, these groups will learn new skills, such as masonry and building toilets, health and hygiene education and so on. If these

new skills are adopted, the sanitation work may continue within the communities also after the outside help is gone, and the knowledge can be taught to more people.

The communities need to also recognise the advantages brought by sanitation. In addition to toilets, sanitation is about clean drinking water, healthier people and in the case of ecological sanitation, also about free fertiliser and saving precious water. However, communities cannot make this happen by themselves but require assistance. Still, it should be remembered that communities need to be in charge themselves; the change cannot be pushed on them.

7 CONCLUSIONS

Sanitation is a major issue in the world today, and Zambia is no exception. This research has shown that the Zambian sanitation sector is indeed a complicated and dynamic platform for a variety of actors. In a developing country such as Zambia, the actors do not necessarily share the others' views on the methods or the actions to be taken, but the goal is same for all of them: to improve the state of sanitation in Zambia. National Authorities, International Actors and Implementers all play a different role in the variety of actor networks in the sector and the society. The main challenge is how to make the complex structure operate smoothly and swiftly.

The research showed that sanitation is in fact not that separate from other issues faced by the developing countries. The main issues consisted of power distribution, cooperation, communication and planning; all issues which could find a multitude of ways of presenting themselves. This supports the vision of integrating sanitation in other policies, having all the sectors and actors acting together for the common goal. The interviews conducted revealed problems in all these areas and many actors, regardless which group they belonged to, recognised the same challenges. Often it came down to responsibility: everybody acknowledged the problem but no one was ready to stand up and fix it.

However, the respondents did agree on success stories as well. The advances made in the field of good governance, the increasing possibilities of public participation and the continuous development of cooperation between different actors received positive feedback from many of the respondents. If there was criticism towards the implementation of decentralisation, there was praise on the idea itself indicating that not everything is amiss, and that they are on the right track.

Overall, the main issues appeared to revolve around governance, power use and, most of all, cooperation. The actors found that the biggest issues were those of dividing responsibilities and finding leadership. When operating with such a large number of actors, some compromises are required. In order to reach compromises, the actors must understand each other's needs and utilise their capabilities. Sanitation is a difficult

subject to approach, not only because of the cultural taboo that is related to it in many parts of the world, but also because it is a complicated issue to tackle. Integration of sanitation policy to other policies would combine a variety of sectors that have been seen as separate ones before. By developing unified policies it is possible to approach issues from different view points while being consulted by experts from different fields.

This research was set out to answer to the questions presented in chapter 1. I have in these pages described the actors of the Zambian sanitation sector and their relationships. It soon became clear that distribution of power was one of the most striking elements in actor relations. The actors formed networks and they had their distinctive practices and values, but their concrete actions depended on their position regarding other actors in the sector. Cooperation was seen as an important factor, but again it is difficult to be equals with an ongoing struggle for power. Politically this was shown clearly in decentralisation process, while socially the questions of public participation and the role of civil society were the relevant ones.

Through interviews and observations the main challenges faced by the sanitation sector were determined and solutions were pondered by the interviewees as well as me. The main constraints involved governance and institutional practices and conditions, technical aspects and financial issues. These challenges were also raised by other studies quoted in this paper, and thus indicating that the problems are real, serious and threatening the sanitation sector in particular.

The final research question dealt with enhancing cooperation and involving actors more in order to improve the sanitation sector. Long term planning is needed in order for Zambia to reach the Vision 2030 of becoming a middle income country. Simple pit latrines will not suffice; more permanent solutions are required. The issues such as education, policy integration and development of the political sector in Zambia reflect the need for sustainable social development. The improvements of the areas mentioned in chapter 5 would serve other policy areas as well, not only sanitation, which should emphasise the importance and necessity of change in these areas. It was the purpose of this research to point out the issues that need attention in order to improve the sanitation situation in Zambia, now it is up to the actors to act on their words.

As any other research of this scale, it raises more new questions. It calls for a comparative analysis between other Sub-Saharan African countries as well as other countries of the world; how is sanitation dealt with in different countries? Are the challenges alike and could they learn something from each other? Or would different societies require different methods of approach – WaterAid has already studied the differences between several developing countries and the challenges caused by them. Also a follow up study on Zambian development might be fruitful in a few years. Since the new national water supply and sanitation policies will be implemented soon and the decentralisation process should move on as well, it would be interesting to learn how the situation has changed and have the challenges been beaten, perhaps giving room to some new ones?

In this research, I attempted to map out the main challenges of the Zambian sanitation sector, to hear what the actors had to say and to suggest ways to improve the situation. As I already pointed out in the first pages of this paper, this study is by no means concluding but merely presents a simplified view of the situation. This study was also made as requested by the Global Dry Toilet Association of Finland as they wished for more detailed information on the different actors and the challenges of the sanitation sector. It is to be hoped for that this research will assist not only GDTF, but any other actor wishing to contribute to Zambian sanitation. As a conclusive remark I can say one thought that has crossed my mind more than once during the research process. The challenges in the sanitation sector are often created by simple things made complicated by people and bureaucracy, which in turn creates more problems. Continuous compromises and ever-changing rules make us often forget the real problem in its simplicity: people need clean water, they need ways to treat their wastes, and they need sanitation. Simplicity does not mean easy: finding the easiest way out is not always the best option – while embracing the simplest option can in fact be most rewarding in the long run.

8 REFERENCES

Austin Aussie (2004), CSIR Building & Construction Technology. Presentation at 1st International Workshop on Ecological sanitation, 21.-23.1.2004, Zambia. In collection GTZ (2006), Capacity Building for Ecological Sanitation. Ecosan Resource Material.

Bartley Mel (2004), Health Inequality. An Introduction to Theories, Concepts and Methods. Polity Press, Cambridge.

Bracken Patrick (2005), Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH. Ecological sanitation programme, Division 44 – environment and infrastructure. Presentation at Water Resources Protection -workshop, 2.-6.5.2005, Eritrea. In collection GTZ (2006), Capacity Building for Ecological Sanitation. Ecosan Resource Material.

Chambers Robert (2005), Ideas for Development. Earthscan Publications, London.

Cumming Oliver (2008), Tackling the Silent Killer. The Case for Sanitation. WaterAid, London.

Elledge Myles F. (2003), Sanitation Policies. IRC International Water and Sanitation Centre.

Fischer Frank (2002), Citizens, Experts and the Environment. The Politics of Local Knowledge. Duke University Press, London.

Haila Yrjö & Pekka Jokinen (eds.) (2001), Ympäristöpolitiikka. Mikä ympäristö, kenen politiikka. Vastapaino, Jyväskylä.

Hajer Maarten & Hendrik Wagenaar (eds.) (2003), Deliberative Policy Analysis: Understanding Governance in the Network Society. Cambridge University Press, New York.

Haller Laurence, Guy Hutton & Jamie Bartram (2007), Estimating the Costs and Health Benefits of Water and Sanitation Improvements at Global Level. In Journal of Water and Health, Volume 5, Number 4, 2007, pp. 467-480.

Hardoy Jorge E., Sandy Cairncross & David Satterthwaite (toim.) (1990), The Poor Die Young. Housing and Health in Third World Cities. Earthscan Publications Ltd., London.

Harvey Peter & Leonard Mukosha (2008), Community Led Total Sanitation. UNICEF.

Hukka Jarmo & Tapio Katko (2003), Water Privatization Revisited. Panacea or Pancake? IRC International Water and Sanitation Centre, Delft.

Huhtanen Sari & Ari Laukkanen (2006), A Guide to Sanitation And Hygiene for Those Working in Developing Countries. Tampere Polytechnic - University of Applied Sciences Publications, Tampere.

International Hydrological Programme (IHP) (2006), Capacity building for Ecological Sanitation. Concepts for ecologically sustainable sanitation in formal and continuing education. UNESCO/IHP, Paris.

JMP, WHO/UNICEF Joint Monitoring Programme (2008), Trend in Access 1990-2006 Zambia. Graphs by UNICEF, Lusaka.

Johnston Anton (1998), On Developing Institutions in Africa. In Wohlgemuth Lennart, Jerker Carlsson, Henock Kifle (eds.) (1998), Institution Building and Leadership in Africa. Elanders Gotab, Stockholm.

Juuti Petri & Harri Mäki (2007), Development of the Governance – Municipal politics and Water Supply in Cape Town, Grahamstown and Hämeenlinna. In Juuti Petri, Tapio Katko, Harri Mäki, Ezekiel Nyangeri Nyanchaga, Sanna-Leena Rautanen & Heikki Vuorinen (2007), Governance in Water Sector – comparing development in Kenya, Nepal, South Africa and Finland. Tampere University Press, Tampere.

Juuti Petri, Tapio Katko, Harri Mäki, Ezekiel Nyangeri Nyanchaga, Sanna-Leena Rautanen & Heikki Vuorinen (2007), Governance in Water Sector – comparing development in Kenya, Nepal, South Africa and Finland. Tampere University Press, Tampere.

Lenton Roberto, Albert M. Wright, Kristen Lewis (2005), Health, Dignity and Development: What Will It Take? Earthscan, London.

Long Norman (2004), Actors, Interfaces and Development Intervention: Meanings, Purposes and Powers. In Kontinen Tiina (ed.) (2004), Development Intervention. Actor and Activity Perspectives. Hakapaino Oy, Helsinki.

Kontinen Tiina (ed.) (2004), Development Intervention. Actor and Activity Perspectives. Hakapaino Oy, Helsinki.

Koponen Juhani & Maaria Seppänen (2007), Kehitysyhteistyön monet kasvot. In Koponen Juhani, Jari Lanki & Anna Kervinen (eds.) (2007), Kehityskaatutkimus. Johdatus perusteisiin. Tammer-Paino Oy, Tampere.

Mackenzie Fiona (1992), Development from Within? The Struggle to Survive. In Taylor D.R. Fraser & Fiona Mackenzie (eds.) (1992), Development from Within. Survival in Rural Africa. Routledge, London.

Melack John M. (2001), Planning and Management of Lakes and Reservoirs: An Integrated Approach to Eutrophication. The International Environmental Technology Centre of the UNEP, Osaka.

Mickwitz Per (2006), Environmental Policy Evaluation: Concepts and Practice. Gummerus Oy, Vaajakoski.

Ministry for Foreign Affairs of Finland (2007), Suomen kehitysyhteistyö 2006. Lönnberg Oy, Helsinki.

Ministry of Health of Zambia (2008), Presentation on Sanitation by Environmental Health Specialist Mr. Fordson Nyirenda, 26th February 2008. Ministry of Health Headquarters, Lusaka.

Ministry of Local Government and Housing of Zambia (2008a), Terms of Reference for a Sanitation Pre-Feasibility Strategy Study for the National Urban Water Supply and Sanitation Programme. Ministry of Local Government and Housing, Lusaka.

Ministry of Local Government and Housing of Zambia (2008b), National Urban Water Supply and Sanitation Programme 2008-2015 (2030), Background and Analysis. Second Draft. Ministry of Local Government and Housing, Lusaka.

Molutsi Patrick (1999), The Interaction between State and Civil Society in Southern Africa: Prospects for Peace and Security. In Wohlgemuth Lennart, Samantha Gibson, Stephan Klasen, Emma Rothschild (eds.) (1999), Common Security and Civil Society in Africa. Elanders Gotab, Stockholm.

Murdoch Jonathan & Terry Marsden (1995), The Spatialization of Politics: Local and National Actor-spaces in Environmental Conflit. In Transactions of the Institute of British Geographers, Volume 20, Number 3, 1995, pp. 368-380. Royal Geographical Society, London.

Muyeba Victor (2008), DTF Sanitation Concept and First Steps Towards Implementation. NWASCO/DTF, Lusaka.

NGO WASH Forum (2008), The State of Sanitation in Zambia. UNICEF, Lusaka.

Ndorukwigira Apollinaire (1998), Building Sustainable Capacity and Institutions in Africa. In Wohlgemuth Lennart, Jerker Carlsson, Henock Kifle (eds.) (1998), Institution Building and Leadership in Africa. Elanders Gotab, Stockholm.

OECD/DAC (2006), Survey on Harmonisation and Alignment, Zambia. Available at [<http://www.oecd.org/dac>].

Peltola Taru (2007), Paikallisen energiahuollon ympäristöpoliittinen liikkumavara: vaihtoehtoiset teknologiat, poliittiset käytännöt ja toimijuus. Doctoral thesis, University of Tampere, Tampere.

Peltola Taru (2001), Verkostosuhteet ja toiminnan muotoutuminen. In Haila Yrjö & Pekka Jokinen (eds.) (2001), Ympäristöpolitiikka. Mikä ympäristö, kenen politiikka. Vastapaino, Jyväskylä.

Pönkä Antti (2006), Terveystensuojelu. Gummerus Kirjapaino Oy, Jyväskylä.

Republic of Zambia (2008), Millennium Development Goals Progress Report 2008, Ministry of Finance and National Planning/UNDP, Lusaka.

Republic of Zambia (2006), Fifth National Development Plan 2006–2010. Broad based wealth and job creation through citizenry participation and technological advancement. International Monetary Fund, Publication Services, Washington D.C.

Republic of Zambia (2002), The National Decentralisation Policy. Towards Empowering The People. Office of the President, Cabinet Office, Lusaka.

SEI Stockholm Environment Institute (2005), Sustainable Pathways to attain the Millennium Development Goals. Assessing the Key Role of Water, Energy and Sanitation. Stockholm Environment Institute, Stockholm.

Sinnatamby Gehan (1990), Low Cost Sanitation. In Hardoy Jorge E., Sandy Cairncross & David Satterthwaite (edit.) (1990), The Poor Die Young. Housing and Health in Third World Cities. Earthscan Publications Ltd., London.

Taylor D.R. Fraser (1992), Development From Within and Survival in Rural Africa. A Synthesis of Theory and Practice. In Taylor D.R. Fraser & Fiona Mackenzie (eds.) (1992), Development from Within. Survival in Rural Africa. Routledge, London.

Taylor D.R. Fraser & Fiona Mackenzie (eds.) (1992), Development from Within. Survival in Rural Africa. Routledge, London.

Tipping David C., Daniel Adom, & Anna K. Tibaijuka (2005), Achieving Healthy Urban Futures in the 21st Century: New Approaches to Financing and Governance of Access to Clean Drinking Water and Basic Sanitation As a Global Public Good. Publications of Ministry for Foreign Affairs, Helsinki.

UNESCO/World Water Assessment Programme WWAP (2003), Water for People, Water for Life. The United Nations World Water Development Report.

UNDP (2006), Human Development Report 2006: Beyond scarcity: Power, poverty and the global water crisis. Palgrave Macmillan, New York.

Voß Jan-Peter, Jens Newig, Britta Kastens, Jochen Monstad & Benjamin Nölting (2007), Steering for Sustainable Development: a Typology of Problems and Strategies with respect to Ambivalence, Uncertainty and Distributed Power. In Journal of Environmental Policy and Planning Volume 9, Numbers 3-4, pp. 193–212.

Wiman Ronald, Timo Voipio & Matti Ylönen (eds.) (2007), Comprehensive Social Policies for Development in a Globalizing World. Report based on an Experts' Meeting at Kellokoski, Finland, November 1-3, 2006. Ministry for Foreign Affairs of Finland, Helsinki.

Wohlgemuth Lennart, Jerker Carlsson, Henock Kifle (eds.) (1998), Institution Building and Leadership in Africa. Elanders Gotab, Stockholm.

Wohlgemuth Lennart, Samantha Gibson, Stephan Klasen, Emma Rothschild (eds.) (1999), Common Security and Civil Society in Africa. Elanders Gotab, Stockholm.

World Health Organization (2006), Country Health System Fact Sheet 2006 Zambia. World Health Organization Regional Office for Africa. Available at [http://www.afro.who.int/home/countries/fact_sheets/zambia.pdf].

Åkerman Maria (2006), Tiedon tuotannon käytännöt ja ympäristöpoliittinen toimijuus. Rajaamisen ja yhdistämisen politiikkaa. Doctoral thesis, University of Tampere, Tampere.

Electronic references

Central Intelligence Agency, The World Factbook: Zambia. Updated on 4th Sep 2008, referred to on 14th Sep 2008. Available at: [<https://www.cia.gov/library/publications/the-world-factbook/geos/za.html>].

Environmental Council of Zambia (2005), About the Environmental Council of Zambia. Updated on Dec 2005, referred to on 14th Sep 2008. Available at: [www.necz.org.zm].

State House (2008), Republic of Zambia. Governance. Updated on 27th March 2006, referred to on 14th September 2008. Available at: [www.statehouse.gov.zm].

Transparency International (2008), Corruption Perception Index 2008. Updated on 23rd Sep 2008. Referred to on 23rd Sep 2008. Available at: [http://www.transparency.org/policy_research/surveys_indices/cpi/2008].

Interviews

Antila Sinikka, Ambassador of Finland to Zambia 4th August 2008, Lusaka, Zambia.

CARE Zambia, Project Manager 4th July 2008, Lusaka, Zambia.

COWI, Senior Water Sector Specialist 4th July 2008, Lusaka, Zambia.

CPRWSSP, Central Province Rural Water Supply and Sanitation project, Health Specialist 14th July 2008, Lusaka, Zambia.

Danish Embassy, Development Councillor 26th June 2008, Lusaka, Zambia.

DAPP, Partnership Director 4th July 2008, Lusaka, Zambia.

GTZ, GTZ Advisor 30th June 2008, Lusaka, Zambia.

Lusaka Water and Sanitation Company, Head Peri Urban East 18th July 2008, Lusaka, Zambia.

MLGH, Ministry of Local Government and Housing, Engineer of Water Supply and sanitation 14th July 2008, Lusaka, Zambia.

MoH, Ministry of Health, Environmental Health Specialist 14th July 2008, Lusaka, Zambia.

NWASCO 1, Director 17th June 2008, Lusaka, Zambia.

NWASCO 2, Senior Expert 17th June 2008, Lusaka, Zambia.

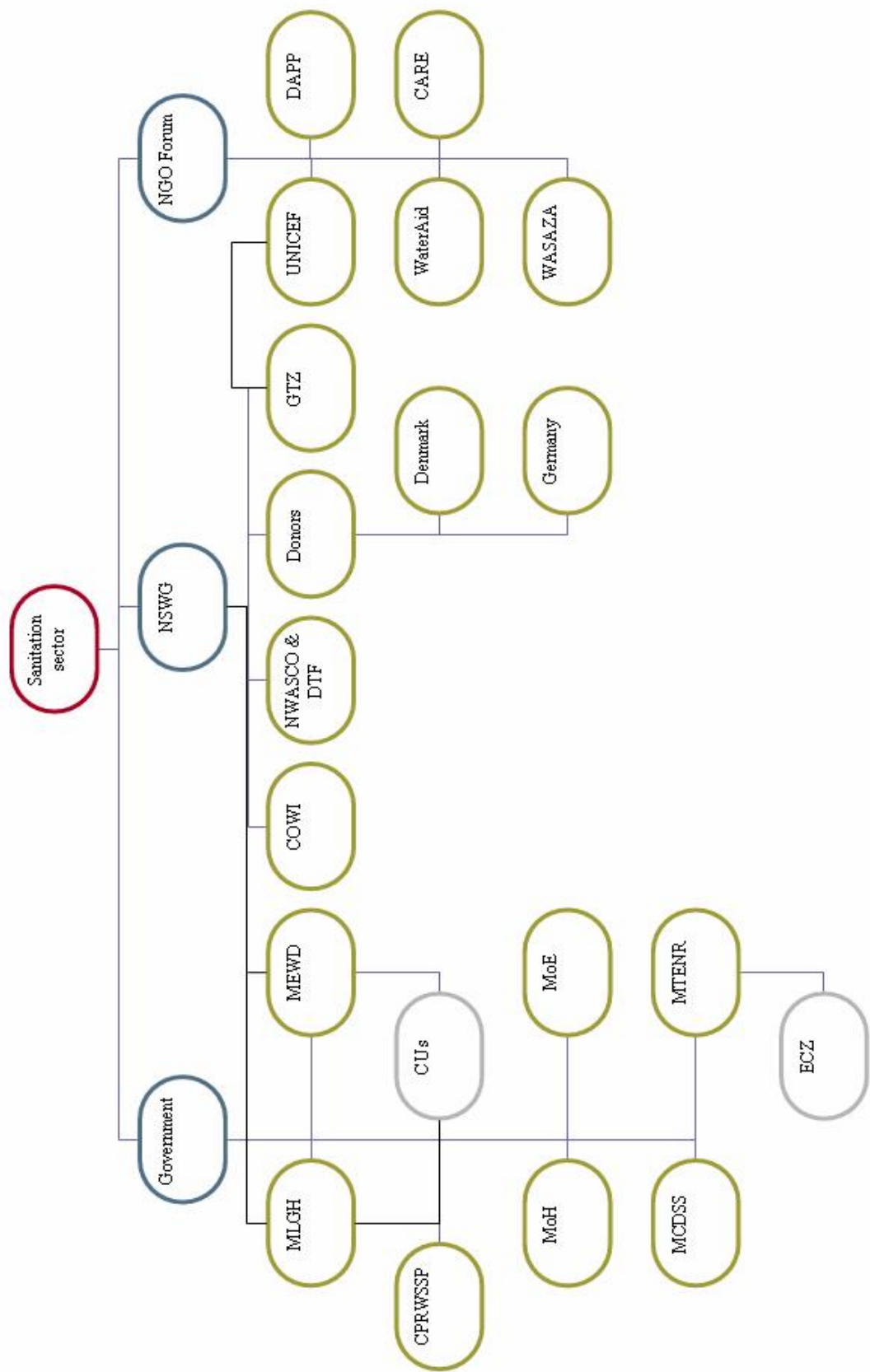
UNICEF, Chief Water and Sanitation 22nd July 2008, Lusaka, Zambia.

WaterAid 1, Programme Manager interview 1st July 2008, Lusaka, Zambia.

WaterAid 2, Research Assistant 1st July 2008, Lusaka, Zambia.

APPENDIX 1

From this chart, it can be noted how the actor and the actor networks of the sanitation sector are linked by one or several actors creating connections between the networks.



APPENDIX 2

Interview frame

Background: Title and job description

Responsibilities of the organisation, its role on sanitation in Zambia

Which matters affect the state of sanitation in the society?

What is the official Zambian policy concerning sanitation? How does this show in practice?

Has sanitation become politically more important lately? (Year of Sanitation, MDGs etc.)

What means do you see for improving sanitation?

- How? What kind of methods, technology etc?
- Who?
- When, what is the schedule?

What kind of challenges/problems can be identified?

Can you think of any solutions for these problems?

- Whose responsibility is it?

Describe the actors' roles and responsibilities

- The government
- NGOs
- Donors
- Locals
- Others

Describe the cooperation between the different parties.

- How could be developed further?
- Who are you cooperating with? Who would you want to cooperate with?
- How does the communication work?
- How are the responsibilities divided?
- Who is in charge?

Does any actor have a negative effect?

How could the projects be made long term ones, how to guarantee continuation?

How do you see the future?

Anything to add?