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Ownership: a Surrogate for Aid Conditionality or the Key to Sustained Water Supply?

The Relation Between Local Government Ownership and Sustained Water Supply in Community Management

A Case Study from Ghana

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Leyla Özay
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Graduation Committee
Prof. Dr. Nico Schulte Nordholt, Technology and Development Group, University of Twente
Prof. Dr. Jaap de Wilde, Faculty of Business, Public Administration an d Technology, Department of Political Science, University of Twente
MSc. Annette Bos, UNESCO-IHE

SUMMARY

Since the 1960's, development assistance for improved access to water has been guided by various principles and approaches. In the last two decades, the leading approach to provide water to rural areas is community management because it is assumed to lead to sustained water supply. However, there is increasing evidence that this approach does not ensure sustained water supply because communities need continued external monitoring and support which is usually not carried out at local levels, also not by local government institutions. In the literature it is pointed out that little is known on institutionalizing monitoring and support to community managed water systems and the objective of this study is to contribute to this knowledge. For this purpose, the principle of ownership is used to analyze the case of Ghana because ownership is pointed out to be a relevant principle for development. The reason to select Ghana is that it is a decentralized country where local governments have the mandate for water supply in rural areas and where community management is adopted as the national strategy. The situation in this country can provide insigh ts in the conditions to institutionalize local government monitoring and support and therefore two small towns are selected where community management is introduced trough water projects, Based on the previous, the following research questions are formula ted for this study:

1. How can institutionalised local government monitoring and support to a community managed water system be established?
1.1 How does local government ownership, in the context of two water projects in Ghana, relate to institutionalised local government monitoring and support to community managed water systems?
1.2 How does central government ownership, in the context of water sector development in Ghana, affect local government monitoring and support to community managed water syste ms?
2. Under what conditions does institutionalized monitoring and support contribute to sustained water supply?

These research questions are answered trough a literature study and a case study. With the help of literature, various concepts are clarifie d like community management, institutionalized monitoring and support, sustained water supply and ownership, which form the framework to analyze the two selected projects and small towns in Ghana. Community management implies that community members participate in the selection, planning and implementation of a water system and that they are responsible for its control and management. An important principle of community management is demand responsiveness implying that community members decide on the water technologies and the service levels they desire. Several conditions are required at the community level to ensure that all community members have equal and sustained access to water services and these conditions encompass technical, financial, organizationa l and institutional determinants. An important institutional determinant is external monitoring and support to a community and therefore it is relevant to consider the conditions to institutionalise this. The first condition is the existence of a regulatory framework that describes the roles responsibilities and arrangements for monitoring and support. The second condition is that the institutions responsible for monitoring and support have the required capacities and the third is that the monitoring and su pport are carried out and become routine in the practice of the institution. Local government ownership in projects might contribute to the existence of these conditions for monitoring and support. Ownership is defined as influencing the content of a devel opment agenda and leading the implementation of that agenda and the level of ownership is determined by an actor's participation in responsibilities, decisions and interactions in the different phases of a project which are pre

planning, planning and implementation. But to understand issues of ownership at local levels, the broader framework in a country needs to be considered as well.

To point out the possible relations between local government ownership in a project and local government monitoring and support to a community, two past water projects in two small towns in Ghana have been analyzed. To collect the necessary information, field visits were made to Ghana in December 2005 and March 2006. In the report, first the difference phases of the projects are described with a focus on local government ownership. Secondly the situation regarding to community managed water supply system a few years after the project completion is explained and also the local government's monitoring and support to the small t own is outlined.

Findings from the selected small towns underlined the assumption that external monitoring and support are essential for sustained services. Local government ownership is pointed out as desirable by various actors and there are indication s that lack of ownership is de-motivating and creates frustration among local government actors. Local government ownership in a project promotes the establishment of relations between the actors involved in the process. And the responsibilities carried out by actors during the project determines how the roles of different actors are perceived after the project. However, it is difficult to state whether ownership directly relates to institutionalized monitoring and support because there are alternative expl anations for the positive or negative aspects among the local governments analyzed. One determinant for local government capacities to monitor and support is its relations with other sector institutions and the support it receives from donors and other sec tor institutions. The major constraint to local governments is their limited capacities to carry out their mandate and specific in the case of Ghana this limitation is created by the existence of central government control at local government level and by the different expectations of from decentralization by stakeholders in development. Decentralization reforms in Ghana have been formulated and implemented in the framework of World Bank conditionality and were thus not owned by the country actors. This mig ht explain the still existence of central control at local levels and thus the lack of capacity at local government level. And finally the differences in donor procedures during projects and different monitoring arrangements are a constraint to develop loc al government capacities in a consistent and strategic way.

A common finding on what is important for sustained water services at the community level, regardless from monitoring and support, is that development principles should be applied in a flexible way and be adapted to local realities. Several principles like demand responsiveness and cost recovery otherwise can create problems to sustainability. Therefore, actors in development need to learn more about the conditions under which the principles lead to sustainable outcomes. And the final conclusion is that ownership as a development principle is difficult to put to practice due to the unequal dependency between the stakeholders in development.

CONTENTS

CASE 1

CASE 2

ANNEXES

TABLES AND FIGURES

LIST OF ACRONYMS

CM: Community Management
CWSA: Community Water and Sanitation Agency
DA: District Assembly
DANIDA: Danish International Development Agency
DCD: District Coordinating Director
DCE: District Chief Executive
DWST: District Water and Sanitation Team
EVORAP: Eastern and Volta Regions Assistance Project
FMP: Facilities Management Plan
GoG: Government of Ghana
GTS: General Technical Supervisor
GTZ: Gesellschaft fur Technische Zusammenarbeit / German Agency for Technical Assistance
GWCL: Ghana Water Company Limited
GWSC: Ghana Water and Sewerage Corporation
IRC: International Water and Sanitation Centre
KfW: Kreditanstalt für Wiederafubau - German Development Bank
LGA: Local Government Act
M&E: Monitoring and Evaluation
MLGRD: Ministry of Local Government and Rural Development
MoU: Memorandum of Understanding
MoWH: Ministry of Works and Housing
NCWSP: National Community Water and Sanitation Programme
NGO: Non Governmental Organization
O&M: Operation and Maintenance
OU: Operational Unit
PPIAF: Public-Private Infrastructure Advisory Facility
R-CWSA: Regional Community Water and Sanitation Agency
RWSS: Rural Water and Sanitation Sector
SIP: Strategic Investment Plan
SWAP: Sector Wide Approach
TREND: Training Research and Networking for Development
WRC: Water Resources Commission
WSDB: Water Sanitation Development Board

PREFACE

As a little girl, we would often make weekend visits to my father's village in southern Turkey. At some points in the village, there used to be hand pumps and dee p wells that were hardly used. Being a child from the city, these hand pumps and wells with their irony tasting waters appeared to me as some obsolete and nostalgic remainings from a closed era. At the time, I had never imagined that around the world children my age had to walk even miles to collect water from such sources. After more than fifteen years, these children who have now become men and women, and their children, still live in the same reality. The topic of this study is these people's access to w ater and throughout the study it could keep me amazed how such a seemingly simple issue is or is being made so complex in some parts of the world.

There are more people than I can mention who I owe my thanks because they all contributed to this study in their own way and made this graduation period extremely interesting. To start with, I would like to thank DGIS in the Netherlands for financing and IRC for facilitating this study. I also want to thank Annette Bos for her time and support in getting me on my way in the initial phases of the study and Eugene Larbi from TREND for facilitating my two field visits to Ghana and for enabling me the access to different people. I would like to thank Helga Fink from EVORAP for her willingness to share information and George Amartei for taking me to the various communities and small towns. Moreover, I have to state my appreciation for the warm and welcoming attitude of all the respondents, staff from TREND and Marieke Adank from IRC, who made the visits very pleasant.

My special thanks goes to Nico Schulte Nordholt and Jaap de Wilde not only for their time and efforts to supervise this study, but also for their subtle hints, just to make me doubt, and take nothing for granted.

Leyla Özay
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1. INTRODUCTION

1.1 Research Questions

Water is a fundamental requirement for human life. Still, having access to water is not self evident for approximately 1.2 billion people in the world and the insufficient amounts and the use of un safe water are a threat to these peoples' health and lives. Since the 1960's many attempts are made to improve access to water in deprived parts of the world. Due to its disappointing results, the development assistance has been under constant reconsideration and has subsequently been led by different principles, concepts and approaches. Until the 1980's emphasis was on the transfer of technologies but these technologies were relatively sophisticated and expensive and could therefore only be afforded by wealthy minorities (Black 1998). The 1980's were characterized by the leading slogan 'water for all' indicating that water was considered to be a basic need and a social good to which everybody should have equal access. In order to ensure poor people had access to water, low cost technologies were designed and introduced in communities through numerous development programs and projects. But the introduction of low cost technologies did not prove to be the solution for sustained access to water mainly because programs and projects paid too little attention on making arrangements for operation, maintenance and rehabilitation of the facilities. Subsequently, these responsibilities were not taken up after project implementation, many facilities became inoperable after a short while and hence the water supply stopped.

As an answer to previous problems, several concepts made their entrance in the development discourse at the end of 1980's such as decentralization, capacity development, participation and ownership. It was asserted that community participation in projects and programs, community ownership and decentralized management would lead to locally more accepted and suitable choices, better operation and maintenance of facilities and thus would lead to sustained water supply. Since then community management is the leading approach to water supply in rural areas but after two decades it is increasingly acknowledged this approach has its flaws and that certain conditions are required for sustained water supply. There is for instance widespread evidence that communities have difficulties with managing the water systems and with reacting adequately on technical, financial and social problems and they therefore need monitoring and support from external entities (Lockwood 2002). Although the technical, financial and organizational conditions at local levels are said to be relatively well understood and there is a wealth of information on these issues, institutional conditions for development in common are said to be less understood (Bossuyt 2001, Morgan 2005). Specific for community managed water supply, an institutional condition that has received little attention and on which little is known is how monitoring and support to community managed areas can be institutionalized (Schouten and Moriarty 2003, Lockwood 2002, Lockwood et al. 2004). And therefore this issue has the focus in this study.

At the end of 1980's many southern countries implemented decentralization reforms which gave local governments an important role in development. Because they often have the mandate for water supply but also because they are institutionalized entities relatively close to communities in physical and social terms, local government institutions are suitable entities to monitor and support communities. However, it is often claimed that local governments have a severe lack of capacities and are not able to carry out their mandate. In literature it is pointed out that donors and NGO's often try to avoid working trough local government systems when they plan and implement development projects (Helleiner 2000, Smout and Sara 1999, Kasumba 1997). According to Helleiner (2000) a high percentage of bilateral development projects are implemented without going through the local government system and that local governments do not have the information on these projects. It appears that the lack of capacity is seen as the justification why local governments are not given ownership in their own development and ownership in this context refers to identifying, formulating and implementing a development agenda. Development

institutions have often been criticized for not involving the country actors in the formulation, planning and implementation of their own development. This has led to the emergence of disc ussions on ownership and various studies point out the importance of ownership for sustainable development. Therefore, this study will try to analyze the possible relations between local government ownership and local government monitoring and support to community managed water supply. For this purpose, two water projects in two small towns in Ghana will be analyzed. To guide the analysis in this study, the following research questions are formulated:

1. How can institutionalised local government monitoring and support to a community managed water system be established?

- 1.1 How does local government ownership, in the context of two water projects in Ghana, relate to institutionalised local government monitoring and support to community managed water systems?
- 1.2 How does central government ownership, in the context of water sector development in Ghana, affect local government monitoring and support to community managed water systems?

2. Under what conditions does institutionalized monitoring and support contribute to sustained water supply?

1.2 Sub-Questions

In order to clarify the concepts used in the research questions, some sub questions are formulated which will be answered throughout this report and these are:

1. What is a community managed water system?
2. What is a sustained water system?
3. What is institutionalised monitoring and support?
4. What is a water project?
5. What is local government ownership?
6. What is central government ownership?

1.3 Research Objectives

The social objective of answering the research questions is that people have sustained access to water in rural areas where water supply is organized trough community management. To achieve this goal, an attempt is made to gain more understanding on how local government monitoring and support to areas with community managed water systems can be institutionalized because this can contribute to sustained water supply. And in order to understand more about local government monitoring and support, the conditions to institutionalize these structures and practices will be object to analysis.

The academic objective of answering the research questions is to outline and analyze ownership as a development principle and to provide a framework to assess local government ownership in water projects. Ownership as a development principle has hardly established itself as a point of discussion in the academic discourse. Nevertheless, ownership is a debated issue among development agencies and financial institutions and these have increasing ly adopted ownership as a principle in development assistance in the last two decades. By analyzing the topic in this research, a modest attempt is made to bridge the gap between the academic and the pragmatic use of the principle of ownership. Among international and national development agencies and financial

institutions, the issue of ownership is usually studied at central government and community levels and not at the level of local government. Taking in to account their increased role after decentralization, emphasizing local government ownership in this study is considered as relevant. Another academic objective of answering the research questions is to contribute to the understanding of institutional dimensions in development which are according to Bossuyt (2001) not adequately understood and integrated in to development practice. Although this study does not pretend to analyze institutional dimensions in a holistic way, analyzing the relation between local government ownership and local government monitoring and support can provide some insight in institutional dimensions in development. And finally the study will try to point out gaps in the current knowledge about monitoring and support to community management and sustained water delivery.

1.4 Methodology

1.4.1 Research Methods

Two methods are used to answer the research questions being a literature study and a case study. The sub-questions are answered through a review of literature to clarify and operationalize the concepts used and the research questions are answered through a case study. A case study is defined as an "empirical inquiry that investigates a temporary phenomenon within its real life context, when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence is used" (Yin 1989: 23).When a research deals with 'how' questions, when the focus is on a contemporary phenomenon and when the researcher has little control over events within some real life context, the case study approach is generally the preferred strategy to conduct research (Yin and Campbell 1989:1). Based on the previous, the case study method is adopted to answer the research questions because the objective of this study is to make inferences on contemporary phenomena that a researcher is not able to influence or control. These 'phenomena' are local government monitoring and support (which is the intervenient and dependent variable) and sustained water supply (which is the dependent variable). The goal is to explain the relations between the principle of ownership (which is the independent variable) and the previously mentioned phenomena. Because the case study method allows the researcher to acquire information from multiple sources and to consider topics from different perspectives, it is expected that using this method enables one to gain a more holistic understanding of the variables and their relations.

Ghana is selected as a case for two reasons. The first reason is the fact that Ghana's national rural water sector policy is based on the community management approach and it is one of the first countries where this approach is introduced on a large scale (Engel et al. 2005: 44). The second reason is that in Ghana, decentralization reforms were introduced back in the end of 1980's and local governments have a mandate for water supply and sanitation in rural areas. Therefore it is assumed that the Ghanaian situation can provide insight in the variables in this study and their relations. Two water projects in Ghana were selected for analysis with the selection criteria that; 1) the projects have a community management approach; 2) the project implementation has been completed at least three years ago and; 3) there are indications that selected projects have varying levels of local government ownership. To collect the relevant information, it was necessary to make field visits to Ghana. As will become clear in the coming chapters, ownership relates to the process of formulating, planning and implementing of a development intervention and it deals with questions of control and influence. However, questions of control of influence are complex and the processes of planning and implementing water projects are rarely documented, especially

not the processes at local levels. Also the variable 'sustained water supply' is difficult to measure from project evaluation reports because these are usually written a short while after project implementation and only touch upon project targets such as the number of facilities constructed, the amount of people served and the arrangements for management. Whereas a project's outcome after a longer period of time is inherent to the notion of 'sustained water supply' and the institutional aspects are an important determinant of this variable rathe r than a project's targets. Actually, sustained water supply is ideally measured after the period over which a water technology is designed to deliver water and the reason is that the ability of a community to operate a water system and replace this after the design period indicates whether the community is able to keep the technical and organizational systems functioning long after project implementation. However due to pragmatic reasons it was not possible to select projects that were implemented a longer time ago. One reason is the expected difficulty with collecting information on older projects because information on their process gets lost due to poor documentation and local dynamics. A second reason is that there were more possibilities in terms of fa cilitation and access to communities where relatively more recent water projects are implemented. As a consequence, two projects have been selected that were completed three years ago and this period is assumed to be short enough to trace information on the process of project planning and implementation and long enough to observe the ability at local levels to react on changes and problems in technical and organizational systems.

1.4.2 Problem Identification

The problem to the study is formulated in an i terative process. The study started with the notification that local governments in southern countries often have a problem regarding their institutional capacities, which in turn is a constraint to manage water supply at local levels. First, a range of topics related to institutional capacity were explored from the literature such as decentralization, ownership, local participation and accountability. Based on these topics and on initial readings about the Ghanaian water sector, a broad questionnaire was f ormulated to get an overview of the institutional framework and the institutional capacity problems in the Ghanaian water sector. Then, a field visit to Ghana was made during 28 November and 16 December 2005. The first, and as will be touched upon later th e second field visit have both been facilitated by the Training, Research and Networking for the Development (TREND) Group in the city Kumasi in Ghana. TREND is an independent Ghanaian research and training institution which is specialised in water and sanitation development. After talks with people from TREND in the first week, adaptations were made to the questionnaire to make it more suitable to the Ghanaian context and for different actors. These questionnaires were used during semi structured interview s with people from different backgrounds such as the central and local government, donor institutions, NGO's and CBO's. The list of respondents of the first visit is presented in Annex 1 and the questionnaires can be found in Annexes 2, 3 and 4. The information collected during the first visit comprises field notes, notes from informal talks, interviews recorded on a tape and various documents most of which were acquired from the TREND-library. During the first visit and during data analysis thereafter, it was observed and concluded that local governments are supposed to have a key role in water provision in rural areas and small towns but these entities are not able to comply with their mandate due to constraints in their capacity. It appeared that on the o ne hand local governments are not sufficiently being involved and are not given responsibilities in water projects and on the other hand local governments are not adequately supported by the central government and donor institutions to develop their capaci ties. These two issues were adopted as the institutional problem of the local governments and the initial research questions and the concepts used were adapted accordingly.

1.4.3 Clarifying the Concepts

Several authors and studies are used to describe what community managed water supply is and especially literature from International Water and Sanitation Centre (IRC) in the Netherlands have been very useful. Since community management emerged in the 1980's, IRC has been closely following and reporting on this topic and IRC is still actively trying to contribute to the development and improvement of the concept and its good practices. The writings from Harold Lockwood are also used intensively in answering the first three questions. This author is an independent water specialist who has worked in various countries over the world and who has large experience on water supply and sanitation issues. He is one of the few authors found who reports specifically on institutionalizing monitoring and support to comm unity managed systems. Actually, readings from H. Lockwood in the initial phases of this study have influenced the focus because it made me more alert on monitoring and support structures. It must be noted that, although he has experience world wide (inclu ding in African countries), his study on institutionalized monitoring and support was based on Latin American countries. But when his writings were used to formulate observable indications, these were adapted to the Ghanaian situation.

Another concept used in the study is 'ownership'. The presented perspectives on ownership as a development principle are mainly based on grey literature such as discussion and position papers. As pointed out above, this topic is especially debated among international and na tional development agencies and financial institutions and their focus is usually on central government or community levels. At central level, there are some studies that were Therefore, based on the existing knowledge, definitions and interpretations on o wnership at central and community levels, a framework was formulated to analyze local government ownership.

1.4.4 Conducting the Case Study

From an overview of the various donors and development agencies and their water projects in Ghana, a selection was made of possible projects for further consideration. Key informants from TREND and IRC were consulted on the suitability of these projects within the framework of this study but also on the logistical possibilities. Subsequently, two water projects wer e selected in two different regions. The first project was the EVROAP project in the Eastern Region which is financed by Gesellschaft fur Technische Zusammenarbeit (GTZ) and Kreditanstalt für Wiederafubau (Kwf) and the second project was the CWSP -2 in the Brong Ahafo Region which is financed by the World Bank. In each region, initially two small towns were selected for analysis. In Africa, the number of small towns is rapidly growing and also the proportion of the population living in such towns. At the same time, very little is known about specific requirements for water management in small towns (IRC 2002). Therefore the focus in this study is on small towns rather than on rural communities. The EVORAP project is implemented in 33 small towns among which Asiakwa and Asesewa were selected. The CWSP -2 project was thought to be implemented in the towns Nkoranza and Donko Nkwanta. However, during the visit to Nkoranza it became clear that only the water supply system in Donko Nkwanta was constructed under CWSP -2 and Nkoranza water supply system had been constructed under PRODICAP project which, as the EVORAP project, was also financed by Kwf.

Field Procedures during the Second Field Visit

Between 28th February and 30th March 2006, a second visit was made to Ghana. During the first week, a plan and arrangements to visit the selected small towns and the various institutions were made with support from TREND. To increase the reliability of the study, a so called case study protocol was formulated based on Yin (1989). This protocol included: 1) background information to the selected projects, areas and institutions to visit; 2) a summary of the research questions, analytical framework and relations to be studied; 3) the questionnaires for the separate visits who se answers would enable to answer the research questions, and finally; 4) a list of sources, respondents and questionnaires that could provide relevant information. In both small towns, it has been attempted to get information from the informants with simi lar functions. The information collected during the second field visit comprises recorded interviews, field notes and other documents such as district plans, minutes of project meetings, consultant reports and TREND reports on capacity need assessments in the selected regions and towns.

It was aimed to interview persons who had been involved in the planning and implementation of the selected projects and persons with certain responsibilities regarding to water supply in the selected towns. Therefore, relevant persons from the CBO's, the local governments and the regional water agency were approached and interviewed in a semi structured way. A list of respondents and the questionnaires can be found in Annexes 5, 6 and 7. Although information had been collected on four small towns, only one small town from each region is reported on. The reason is that significantly less information could be obtained on the process how CWSP -2 was planned and implemented in Donko Nkwanta. Because the amount and the sort of in formation acquired in the towns Asiakwa and Nkoranza were most similar, these two towns are chosen for in depth analysis. The information acquired on the small towns Donko Nkwanta and Asesewa have been used in the background as a means for triangulation. By using difference source of evidence like formal and informal documents, interviews with people from different backgrounds and observations, it is attempted to limit the construct validity of the study. Information from different sources on the same issues has been compared in order to control for contradictions. The findings pointed out were supported by information from two or more sources.

After the second field visit the decision was made to only consider the water supply aspect of projects and not the sanitation aspects. In Ghana the responsibilities for sanitation are divided into two different ministries which make the institutional framework and the ownership a little more complicated to analyse. Given the time constraint, incomplete information o n the sanitation aspects and the wish to have a better focus, sanitation issues are excluded from the analysis. This does not mean sanitation is considered as less important and it is admittedly a weakness in the study because the picture provided about th e projects is far from complete. And just as important: leaving sanitation out of the analysis does not do right to the actors that put many efforts in to this issue.

1.4.5 Limitations to the Study

Constraints to Measure Concepts

Some issues have been a constraint to assessing the level of local government ownership and which thus limited the analysis of the relations between ownership and institutionalized monitoring and support. The projects analyzed in this study were selected based on the criteria that these were planned and implemented in different regions and trough a different process of involving local

governments. The rationale was this would enable the identification of possible effects of different levels of ownership. Although the local government involvement and hence ownership in the projects are different, it is not as large as expected. This is partly due to the fact that the projects were implemented within the same institutional framework which affects the processes at local levels in a similar way. Another constraint to assess ownership was that various donor projects had been and were being implemented in the selected districts and in these projects local government ownership varied. Therefore possible effects of ownership in the selected projects and the effects of ownership in other projects are indistinguishable. A suggestion for others to avoid these problems would be to select project in two different countries and/or to select projects in areas where in each only one donor is active. Another limitation in the measuring of the concept is that 'institutionalization' is a process that evolves over a period of time. To really understand such process it could be more appropriate to have several moments over a longer period time to assess monitoring and support. Such approach was not possible given the time and resource limits.

Possible biases

The most obvious bias in this study is the cultural bias. The concepts used such as 'ownership' and 'community management' originate from northern institutions and agencies. Also studies and literature on these concepts are, with few exceptions, conducted by northern actors. Using these sources as a framework and conducting this study as a person from a northern country, inevitably causes a cultural bias. One example where this bias becomes clear is that existing institutional framework of formal policies; rules and regulations are highly stressed in the analysis because from a northern perspective, these are important aspects of structuring social life. Whereas indigenous and informal institutions are not considered in the study although in a country such as Ghana it is highly likely that the indigenous culture, the informal institutions and local dynamics are very influential on the concepts under study. Excluding these issues from the analysis makes the analysis incomplete and might have led to wrong interpretation of the data.

Generalization

The possibility to generalize the findings in the study to other countries is probably limited to countries that have a comparable institutional framework at central level. As will become clear, Ghana has a national regulatory framework with community management as a national strategy and in which monitoring and support to community management is built in. The national framework highly influences what happens at local level. In other countries with a differing institutional set up, the findings from this study might not be of much use. Specific to Ghana, the management of water supply in more rural areas might not be comparable to the situation in the two small towns analysed in the study due to the differences in community dynamics and socio economic structures.

1.5 Structure of the Report

This report is structured as follows. First the sub-questions 1, 2 and 3 are answered in chapter 2 through explaining the principles in community managed water systems and providing a definition and the conditions for sustained water supply. This chapter also outlines the characteristics and the conditions for institutionalized monitoring and support. Secondly, the sub questions 4, 5 and 6 are answered in chapter 3 through defining ownership in two different perspectives and through presenting a framework to analyse local government ownership.

Having provided the analytical framework in chapters 2 and 3, a move is made to the Ghanaian case starting with an introductory chapter 4. In this chapter, first the institutional framework of the rural water supply in Ghana is given and secondly a short overview is giv en of how the cases will be analyzed. Chapter 5 describes the water project in small town Asiakwa in the Eastern Region and chapter 6 describes the water project in small town Nkoranza in the Brong Ahafo Region. In both cases, first the pre-planning, planning and implementation process are described and the local government ownership in that process is assessed. And second, the current functioning of the community managed water systems and the local government monitoring and support to the small towns are analysed.

In order to understand the broader context, two important developments in the water sector are touched upon in chapter 7. This chapter describes the background against which decentralization and water sector reforms in Ghana were formulated to s ubsequently assess the central government ownership in these processes. This chapter also outlines the general situation regarding to local governments' roles, responsibilities vis a vis their capacities. And finally, chapter 8 elaborates on the findings in previous chapters and provides the final conclusions on the research questions.

Table 1. Structure of the Report

Chapter	Topic	Content	Methodology
1: Introduction to the Study	Outline of the study	Background to the problem, the questions objectives. Explanation of the methodology used.	Literature Study
2: Analytical Framework	Sub-questions 1, 2 and 3	Outlining community managed water system, institutionalized support and monitoring and sustained water supply	Literature Study
3. Analytical Framework	Sub-questions 4,5 and 6	A framework to analyze local government ownership	Literature Study
4. Introduction to the Case Study	Background to Ghana and the two Projects	An overview of the Ghanaian institutional framework for water supply and background information to the procedures applied and information collected in two selected towns.	Literature Study and Field Visit
5. Sub Case 1	Water project 1-related to research question 1.1	Outline of the pre planning, planning and implementation of the EVORAP project in small town Asiakwa in the Eastern Region & conditions to sustain water supply in water system Asiakwa	Case Study: Interviews, Field Observations
6. Sub Case 2	Water Project 2-Related to Research question 1.1	Outline of the pre planning, planning and implementation of the PRODICAP project in small town Nkoranza in Brong Ahafo Region & conditions to sustain water supply in water system Nkoranza	Case Study: Interviews, Field Observations
7. Water Sector Developments in Ghana	Related to Research Question 1.2	Assessing the central government ownership of decentralization Reform, Water Sector Reforms and the role given to local governments in these reforms.	Case Study: Interviews, Field Observations, Review of Documents on Ghanaian Water Sector
8. Conclusions, Recommendations	Research Questions 1 and 2	Conclusions and recommendations	

2. A COMMUNITY MANAGED WATER SYSTEM

This chapter answers the first three sub questions by outlining the principles o f community managed water systems (section 2.1), the conditions to keep such systems functioning and sustained (section 2.2) and the conditions to establish monitoring and support structures (section 2.3). Later in chapter 3, a more specific description wi ll be given of a typical water project with a community management approach.

2.1 Principles in Community Managed Water Systems

Community management is the most decentralized approach to manage water services. This approach emerged in development practi ce since the 1980's and in the 1990's it had become the leading approach to implement water supply projects in rural areas in southern countries. Community management approach is based on several interlinking principles including community participation, decentralization and managing water at the lowest appropriate level, considering water as an economic good and demand responsiveness. The following sub sections briefly explain what these principles implicate in practice.

2.1.1 Demand Responsiveness

Prior to the 1990's, national and international efforts for improving access to water were based on the so called 'supply driven approach'. Assumption to this approach was that governments knew what was needed at community levels and they could provide the ma intenance and management capacity required (Lockwood 2004:6). The disappointing results of the many efforts to improve water supply led to the conclusion that supply driven approach had not been conducive to sustainable results and therefore had to be reco nsidered. During the International Conference on Water and Environment in Dublin in 1992, two key principles were adopted by the donor community and these were the principle of demand responsiveness and the interlinked principle that water is an economic g ood. The idea underlying to these principles is that water is a commodity because of the services involved in providing safe water. Considering water as an economic good implies that end users are seen as 'clients', that these clients make a 'demand' for a certain water service and that a price should be attached to having access to the water service. Within the demand responsive approach in its purest form, water services are provided trough market mechanisms. Therefore the quality and the quantity consum er's demand at a given price should be taken in to consideration when water supply services are selected and planned (Katz and Sara 1998:3). Another implication to this principle is that, when selecting areas to provide services, those communities that dem and for improved services have priority over other communities that do not demand for water services. The following reason is given by Katz and Sara (1998: 4) why a demand responsive approach is important: *'a person's willingness to give up valued resources in exchange for a service indicates that the person values that service. If this value at the community level is greater than or equal to the cost of providing and maintaining the service, one can assume the community will be willing and able to maintain the service'*. Katz and Sara (1998) conducted a study to analyze the effect of a demand responsive approach in water supply projects on the sustainability of a water supply system. They found a statistically significant positive relationship between higher levels of demand responsiveness and the sustainability of the water supply systems. It must be noted that the authors indicate to having selected the projects based on their high degree of demand responsiveness and therefore findings from Katz and Sara (1998) do not say anything about superiority of demand driven projects over 'supply driven' projects or those that have demand responsive approach in a lesser extent.

2.1.2 Community Participation and Community Control

The 'demand' for water is influenced by an individual's budget, the price of the good, prices of other goods and individual's preferences (Katz and Sara 1998: 3). Having a demand responsive approach requires that this 'demand' is made explicit. Therefore, decisions regarding to technologies, the levels of services and the location of facilities are ought to be made trough the participation of community members in the planning and implementation of services (Lockwood 2004: 11). However, community participation is not limited to project planning and implementation alone. Another principle is that community members are in direct or indirect control over the operation and management of the system (Schouten and Moriarty 2003). Control refers to making strategic decisions about the technical, finan cial and organizational aspects in the system for instance the setting of tariffs, selecting management modalities and formulating institutional arrangements for management. In order to realize direct or indirect community control, usually a Community Based Organization (CBO) is established and trained to take over the responsibility for the management and control on behalf of the community. Both in the literature as in practice, the importance of including women in the participatory processes and their representation in a CBO are highly stressed.

Another form of participation other than participation in the decisions as set out above, is that community members have a share in the recurrent costs of the system (Lockwood 2004:8). The share by the communities is usually decided up on based on socio-economic characteristics at local levels.

2.2 Sustained Water Supply in Community Management

2.2.1 Defining Sustained Water Supply

Since the 1980's the community management approach is embraced by a wide range of stakeholders in development and with each having their own motivation. Schouten and Moriarty (2003) suggest what these motivations were and claim that governments saw introduction of the community management as a way to reduce demands over their resources, f or some donors it was a way to bypass inefficient governments to have a more effective implementation of projects, by some other donors it was seen as a way to apply their principles such as increased private sector involvement in public affairs and finally NGO's saw it as an opportunity to increase their role and to become the voice of the community (Schouten and Moriarty 2003:16). Various assumptions are underlying to community management and the principles set out above. First assumption is that community participation creates a better fit between local needs and increases their feeling of 'owning' the system. As a result, community members feel responsible for the proper maintenance and sustaining the systems and thus, these principles will lead to more sustainable results than the previous supply driven approaches. However, the effectiveness of these principles can not be taken for granted and some conditions are required for community management to lead to sustainable results. In order to determine what these conditions are, first it needs to be defined what is understood under 'sustained water supply'. Therefore this and the following sub sections outline the characteristics and the conditions of sustained water supply.

In this study, the goal of a water service is considered to be the delivery of water in adequate qualities and quantities and equal access to these services over time. The International Water and Sanitation Centre (IRC) provides a definition of a sustained water supply which has the fol lowing characteristics: 1) the physical system is functioning and is being used; 2) the system delivers an

appropriate level of benefits (quality, quantity, convenience, continuity, health) with equal access to all, including the poorest, women and men; 3) the system keeps functioning after a prolonged period of time (which goes beyond the life span of the original equipment); 4) the management is institutionalized; 5) the system can be operated and maintained at local level with limited but feasible external support; 6) operation, maintenance, administrative and replacement costs are covered at the local level and; 7) It does not affect the environment negatively (IRC 2003:15).

Some remarks should be made on the definition above. A note on the second characteristics is that this issue is perceived as important but not considered in the projects analyzed in chapters 5 and 6. Water has multiple functions and can be used for different purposes. Perceiving certain functions and purposes as more or less important, has implications for the quality and quantity of the water delivered in a system but this study does not go in to such detail. According to the community management approach 'benefits' should be determined by community demand, therefore it is assumed that technical designs in projects reflect what is the appropriate level of benefits for a certain community. Another reason not to consider this characteristic is that collecting information on 'equal access' was not possible in the scope of this study be cause the visits to the towns were short and this is a complex issue to measure. However, in case there are ad hoc findings on this issue, this will be shortly pointed out.

A remark on the third characteristic should also be made. Water systems are desig ned to operate for a period, in the definition referred to as the life span, after which these need rehabilitation or replacement because otherwise water supply will stop. Therefore arrangements need to be in place to ensure that responsibilities for rehab ilitation or replacement will be taken up. The water systems in the selected projects were constructed approximately three years ago but the life span of the facilities are much longer. Due to practical reasons such as the little information available on o ld projects and less possibilities regarding the facilitation, the projects selected had completed relatively more recent.

The sixth characteristic is related to the principle of 'cost recovery' which can be defined as 'to recover all the costs associate d with a water system' (Cardone and Fonseca 2003:15). According to this definition, all costs should be met at local levels but this is one of the possibilities among others: costs can be met by different actors at different levels and therefore 'local lev el' in this sentence is left out. And finally, the last criterion about the environment is not taken in to consideration because the focus here is on institutional aspects of the delivery of sustained water services.

2.2.2 Conditions for Sustained Water Supply

There are various conditions that determine whether or not water supply is sustained in a community managed system and the following sub sections describe these technical, financial, organizational and institutional conditions.

2.2.2.1 Technical Conditions

Technical conditions are concerning the characteristics of the physical infrastructure including the source of the water, quality of the infrastructure and the available knowledge and skills on the selected technology. The first technical con dition for water supply is that the source of the water provides an adequate amount of water all year round. The second condition is that persons from within or outside the community should be available who have the requisite skills and knowledge

to operate, to maintain, repair and rehabilitate the infrastructure. Another condition to sustain services is that a community is able to find the spare parts, tools and the equipment that is required for the operation, maintenance and repairing of a specific techn ology.

Based on field experiences with community management and based on their studies, many have concluded that the selection of the technology is a crucial determinant of the technical conditions mentioned above. Consequently, the selection of technolog y must be done carefully because of the implications it has for the required capacities within a community and the access a community has to external support.

2.2.2.2 Financial Conditions

Financial conditions for a water system are related to the costs , incomes and organizational aspects in the system. The various costs in a water system can be categorized in to the facility costs (comprising the costs of design, construction, operation and maintenance, repair or replacement and expansion), the administrative costs (comprising the costs of management, staff, and office) and the institutional costs (comprising costs such as organizing community meetings, meetings with other entities and contract management). These costs need to be recovered in some way or another and experience shows that one condition to ensure this is the clarity on which actors are responsible for financing the certain categories of costs. Besides this clarity on responsibilities, it is also a condition that these actors have a source o f income to meet the costs and that this source is sufficient and reliable (Lockwood et al. 2004). The responsibility for covering costs can be allocated among different actors such as community members, local governments, central governments and donors. These actors are responsible for the financing of certain costs and for the generation of income, for example through searching for subsidies or though selling the water for a tariff determined in consultation with the community members. A crucial aspect of the financial viability is that water tariffs are set at the right level. This means that the tariff is accepted and affordable to community members but that at the same time, the income generated through applying a certain tariff covers the costs which a re not met by other financial means. From the literature it appears that this is in practice often paradoxical. The poverty levels in rural and semi-urban areas, in terms of a lack of money, are often high because these areas usually have more traditional economic structures rather than modern economies which are based on industrial production. Therefore, people do not have regular and cash incomes and hence might not be able or willing to pay for water; especially not when a tariff is perceived as too high . The related issue of revenue collection is pointed out to be either the cause of success or failure in many water systems. Inadequate revenue collection by a CBO, which is either caused by a low level of water consumption or by troubles with revenue collection, is often a constraint to sustain water supply in communities (Berg van den 2000, Lockwood et. al.2004). At the same time, lower and thus socially more acceptable tariffs are neither a solution for financial sustainability because then the incomes generated are might not be sufficient to meet system's costs. Based on the previous it can be stated that although the determination of tariffs is crucial for financial viability, it is a highly problematic issue. And this problem is further reinforced by constraints in the development practice such as difficulties with obtaining data on costs implications of different technologies, inadequately developed methodologies to study the willingness and ability to pay among community members and difficulties with translating the outcome of these studies in to the right tariffs (Cardone and Fonseca 2003).

Having pointed out that setting the tariffs right is important for generating sufficient incomes, it must also be noticed that right tariffs are not the only con dition for financial viability. Regardless

of the question which costs are covered by the tariffs, having a tariff system requires that a CBO's members are capable of setting and reviewing tariffs and to take responsibility for the financial management and control, including record keeping, revenue collection, auditing and monitoring. Besides wrong tariffs, another reason for having insufficient financial resources is often stated to be the high technology costs (Lockwood 2002). Therefore minimizing techn ology costs can be used as a measure to reduce financial deficits. Technology costs are determined by its complexity, the amount of staff it requires for operation and maintenance and its dependence on energy. Other aspects that affect technology costs are the availability and the costs of pare parts and the availability and costs of private actors who can deal with the specific technology (Brikke 2002). Following from the previous, many studies underline the importance of selecting the technologies carefully through taking all the cost implications in to account. As explained previously, *community management* is based on a demand responsive approach which implies that community members should select the technology and determine the service levels. However, participation by a misinformed community group can lead to wrong technical decisions (Cunha and Pena 1996:12) and therefore community members should make their choices in an informed way. This is underlined in the study by Katz and Sara (1998:5) who conclud e that it is critical that a demand responsive approach includes procedures for an adequate flow of information to households where members make informed choices on the systems and the level of service they prefer. An informed choice is that a decision by a community or an individual is made with a clear understanding of the financial implications and the implications for planning, implementation and responsibilities (Katz & Sara 1998 and Cardone and Fonseca 2003).

And finally, technology costs can also be reduced by preventive measures such as routine maintenance, leakage control systems, decreasing the dependence on energy or chemicals and local production and supply chains of spare parts (Cardone and Fonseca 2003).

2.2.2.3 Organizational Conditions

Organizational conditions are related to the existence of a formal organization that plans, manages and controls technological and organizational aspects of a water system. Presence of such an organization is found to be a significant determinant for the sustained functioning of a water system (Katz and Sara 1998). The technological aspects include the planning, managing and controlling the operation, preventive maintenance, repairs, expansion and rehabilitation or replacement. And organizational aspects include the planning, managing and controlling issues as budgeting, revenue collection, record keeping, financial transactions and contract management. This implies that technical, financial and organizational conditions for sustained water supply are interrelated and overlapping. To ensure the presence of a formal organization, projects that introduce community management in a certain area often establish a CBO and prepare its members to take up the responsibilities mentioned above. A CBO's members who are usually volunteers from within the community and who often need support in developing basic skills for technological and organizational planning, management and control. Therefore training and retraining CBO members are found to be a determinant for sustai ned functioning of a water system (Katz and Sara 1998 and Lockwood et al. 2004).

2.2.2.4 Institutional Conditions

Institutional conditions for sustained water supply are concerned with the relations between a CBO and the relevant external actors. These relations can refer to various things, but the main focus in this study is on support and monitoring relations between a CBO and a local government

institution. Importance of supporting and monitoring communities is increasingly proven and recognized (Lockwood 2002, Schouten and Moriarty 2003). Because supporting and monitoring a CBO is relevant to this study, in the following section specify this issue in more detail.

2.3 Institutionalised Monitoring and Support

2.3.1 Characteristics of Institutionalized Monitoring and Support

This gives an overview of what kind of support and monitoring a CBO might need to ensure that a water system is functioning and what the conditions are to institutionalize monitoring and support. Monitoring and support can be divided in to technical and organizational support and monitoring and the following framework is based on Lockwood (2002) with some adaptations. When Lockwood (2002) uses the word 'support', this also refers to monitoring. But because the activities regarding to monitoring and support are different and these can be carried out by different actors, monitoring and support are handled as separate issues in this study. Monitoring could be seen as an ongoing activity and the need to support a CBO can be detected trough monitoring or a CBO request for support which is not necessarily provided by the monitoring institution. What it actually comes upon is that the aim of monitoring and supporting a CBO is to ensure that the previously given technical, financial and o rganizational conditions are present at community levels.

Technical monitoring and support is related to the physical aspects and sustaining the technical functioning of the water infrastructure. The members of a CBO might need support in case there is a system breakdown and a CBO wants to get involved with an external actor to carry out technically complex interventions or preventive maintenance or in case a CBO needs to purchase spare parts to repair the infrastructure and so on. Support could be provid ed directly or indirectly through linking a CBO to the relevant entities. But support can also be in the form of knowledge transfer and developing skills among CBO's members or local technicians, for instance trough trainings and workshops on subjects related to operation, maintenance, management and control of the system. External monitoring of the systems implies technical inspections are useful to reduce or prevent major problems from occurring if the technical monitoring within the system is not adequate enough.

Organizational monitoring and support is related to the management aspects in the systems. CBO's are often elected or appointed entities that have sitting for a period of usually three or four years. This implies that the community might need external support to re-establish a new CBO and to train the new CBO's members on subjects related to financial and administrative planning, management and control. A CBO's members are expected to set and review the tariffs and the budgets regularly for which they might need external support.
The regular collection of information and monitoring are pointed out to be important aspects of sustainability (Lockwood 2002:25). An important criterion for effective technical and administrative monitoring is the collecting, analyzing and giving follow up to information in a systematized way. It is pointed out that this enables the comparison of information across groups and communities and could be used to determine what kind of support is required or works best at community levels. In Box 1, some examples for monitoring and support issues are given.

BOX 1. Possible Areas of Support to Community Managed Water Systems

Technical
- Preventive and corrective maintenance necessary for the upkeep of communal water supply systems.
- Finding of spare parts and reliable service providers in the case of complex repairs requiring private sector companies
- Chlorination of water supply systems, advice on dosage and availability of chlorine in different forms
- Inspection of communal water supply systems and household sanitation facilities

Administrative

Establishing and calculating adequate tariffs (including differentiated rates for vulnerable groups where appropriate), and when to modify tariffs
- Collection of tariffs and including the possible use of water meters at points of consumption
- Planning and staging special community fundraising events
- Bookkeeping, basic accounting and financial recording
- Periodic auditing of accounts
- Recordkeeping, drafting minutes of meetings and formal correspondence, interpretation and explanation of legal issues relating to system ownership, transfer of title or delegated authority for operation and administration
- Assistance with acquiring legal status as a community organization and in obtaining *Personería Jurídica*
- Formation of management committee or water board, establishing roles and responsibilities, and restru cturing the committee as necessary
- Training in management techniques, how to plan and run committee meetings and community general assemblies
- Training in communication
- Conflict resolution

Source: Lockwood 2002: 27-28

2.3.2 Conditions for Institutionalized Monitoring and Support

Following sub sections point out some of the conditions to institutionalize monitoring and support to communities. In the two cases later on, these conditions will be analysed among local governments to understand the support and monitoring structures between a lo cal government institution and a CBO.

2.3.2.1 A Regulatory Framework for Monitoring and Support

One of the key issues to institutionalize monitoring and support is pointed out to be the presence of norms that are agreed upon (Lockwood 2002:30). These norms are often made explicit in a regulatory framework of rules, laws and guidelines and this framework should clearly define the roles, responsibilities, procedures for monitoring and support and point out what the expectations from the local government are in terms of putting financial, technical and human resources in to the process.

2.3.2.2 Capacities within the Institutions

To be able to carry out responsibilities conform the regulatory framework, actors from the local government should possess the required capacities for effective monitoring and support. These capacities can be categorized in to financial, human technical and organizational capacities. Financial capacity refers to the existence of a reliable source of funding to cover the costs an d the presence of a budget for monitoring and support activities. This budget should cover costs such as

the salaries, operational costs such as for equipment and administrative costs such as the cost of office. The second category is human capacity which relates to having a sufficient number of staff and the presence of required skills among staff to fulfil their tasks. Field staff for example needs to visit communities and CBO's regularly and should be aware of which indicators are important when collecting information. Administrative staff needs to have the technical knowledge, the skills to summarize and analyze the raw data from the field to detect problems and to know what kind of intervention is required in a certain situation. Besides the technical k nowledge and skills, it is also necessary that the staff have the necessary technical equipment for support and monitoring. Organizational capacity refers to clarity on the responsibilities, procedures and arrangements within the local government. These can be regarding to exchange information between individuals or departments involved in monitoring and support. And as pointed out earlier, systematized way of collecting and analysing information is important for effective monitoring and therefore the local government institution should have a information management system with clear procedures for gathering, documenting and analysing information (Lockwood 2002: 25, 30 -38).

2.3.2.3 Practice of Monitoring and Support

It is obvious that a regulatory framework and the presence of capacities for monitoring and support are useless if the responsibilities are not carried out and arrangements are put in to practice. Monitoring can only said to be in place when monitoring is really carried out by a local government institution, meaning that information on various aspects of the water system is regularly collected through field visits, meetings or the exchange of documents, that the information is documented and analyzed in a systematized way and that there are clear arrangements to give follow up to this analysis. Support in practice implies that a local government institution dedicates technical, financial and human resources to solve problems of a CBO. Only if these procedures become routine a local government instituti on, one can say that monitoring and support are institutionalized.

2.4 Conclusion

This chapter has answered the three sub questions 'what is a community managed water system', 'what is a sustained water system' and 'what is institutionalized monitoring and support'? And to answer these questions, the definitions and the conditions to establish 'community management', 'sustained water supply' and institutionalized monitoring and support' have been outlined.

Several principles such as demand responsiven ess, community participation and community control are underlying to organizing water supply trough a community management approach. According to these principles, water users are clients who make their demand for improved water supply explicit, who decide on the quality and quantity of water they desire at a given price and who are responsible to have a share in the costs of the system. In order to make their demands and decisions explicit, community members are supposed to participate in the decision making process during which a water service is planned and implemented. Another aspect to community management is that communities, often through an appointed or elected CBO, control the operation, maintenance and management and take strategic decisions regard ing the water system. However, a major concern to the community management approach is the question whether local communities are able to sustain their water supply over time. The characteristics of sustained water supply are that; 1) the physical system functions over its design period and is rehabilitated or replaced thereafter; 2) the system delivers appropriate levels of benefits to which community members have equal access; 3) the system can be operated at the local level with limited and

feasible external support; 4) the costs of operation, maintenance, administration and replacement are covered and; 5) the management of the water supply is institutionalized. In the literature, some conditions are pointed out as required to ensure that the previously s ummed up characteristics are in place. These conditions can be divided in to the presence of financial, technical, organizational and institutional capacities at local levels. The institutional capacities are further specified with a special focus on institutionalized monitoring and support to a community because this condition is important for sustained water supply since it directly or indirectly affects the presence of the other conditions. Having characterized this issue as important brought up the ques tion how institutionalized local government monitoring and support can be established and this question was answered trough identifying the conditions to institutionalize monitoring and support from literature. The existence of a regulatory framework that outlines the roles, responsibilities, procedures and the expectations from different actors regarding to monitoring and support is pointed out as a condition. In order to carry out the responsibilities conform this regulatory framework, a local government institution needs to have the financial, human, technical and organizational capacities. And finally, the existence of the rules and capacities alone is useless if these are not put in to practice and become routine within the local government institution.

3. OWNERSHIP

This chapter provides the framework by which local and central government ownership will be analysed in the Ghanaian case in chapters 5, 6 and 7. This framework is provided through answering the sub questions 'what is local government ownership', 'what is central ownership' and 'what is a water project'.

3.1 Defining Local Government Ownership

'Legal ownership' is related to the right to possess, use, control and transfer an object (Saxby 2003). As a development principle, the meaning of 'ownership' is broader and deals with the distribution of power, roles, responsibilities and relations among stakeholders in development. The principle 'ownership' in the development discourse emerged in the 1990's and in this study 'ownership' exclusively refers to the development principle unless it is made explicit that its legal meaning is under consideration. 'Owners' can be for example central governments, local governments, NGO's, grass-root organizations, donors and private institutions. The object that is being owned can also vary from a policy, a reform, a program to a project or the decision in a project. Before defining ownership, first two different perspectives from which ownership can be analysed are given in the following sub section.

3.1.1 Ownership: Capacity Development versus Alternative to Aid Conditionality

The first perspective from which the principle of ownership can be analysed is, to consider it as part of the concept of 'capacity development' which emerged in the field of development in the 1980's. Capacity can be defined as 'the ability of individual and organizational units to set objectives, solve problems and perform functions effectively efficiently and in a sustainable way (UNDP 1998[1]). The idea underlying to this concept is that capacities need to be inherent to a country's organizations and institutions at all levels, because otherwise southern countries will keep being dependent on external support due to dynamics in societies and their inability to react adequately on changes.

Especially from the 1980's onwards, donors and external agencies received criticism for the minimal involvement of southern actors in the planning and design of their development interventions. It was asserted that this led to wrong technical choices and moreover did not contribute to development of inherent capacities. Practices of identifying, designing and appraising a project are seen as important opportunities for capacity development and participation of local actors in decisions is expected to lead to development choices that suit local circumstances better (Schacter 2000).

The second perspective on the principle of ownership emerged in the 1990's and in this perspective ownership is a way to replace aid conditionality. Aid conditionality is defined by the World Bank as 'the set of explicit conditions upon which the Bank disburses under development policy lending, and which are listed as legal conditions in the Bank's Loan Agreements' (CCODP 2005: 8). The reason to use aid conditionality is stated to be to "increase the probability of prompt repayment of debt and sometimes even to ensure that the funds (including grants) do not support policies inconsistent with the values of the creditors" (Johnson 2005: 8). In this perspective,

[1] This definition is adopted from technical paper on a webpage without pages.
http://magnet.undp.org/cdrb/Techpap2.htm

ownership is studied at central government level and objects being owned are reforms, policies and programmes. Several studies on Structural Adjustment Programs [2] and reforms in southern countries in the 1990's gave rise to the discussion of ownership. These studies proved that attaching conditionalities to the release of loans, led to a lack of acceptance and a lack of commitment at central government level to implement reforms and programs. Thus, due to conditionality, the previously introduced reforms had not been conducive to achievement of goals of both southern countries and of international institutions (Johnson 2005: 1). A common conclusion in the previously mentioned studies was that, contrary to conditionality, central government ownership created commitment at the central government level to implement reforms and policies. Due to these conclusions and the proven ineffectiveness of conditionality, the World Bank and IMF are currently reviewing the use of conditionality in this review central government ownership is a central point of discussion (CCODP 2005). Taking a look at some studies and discussions, the way central government ownership is defined can roughly be categorized into two. In the first category, ownership is established when the content of the reforms and policies originate from the central government and if government actors formulate, agree and prefer a reform or a policy (Johnson and Wasty 1993, Killick 1998).In the second category, it is considered as less important where the content of reforms and policies originate from or who formulates a policy and a reform. Instead, central government agreement on and its preference for a reform or a policy are considered as important (Johnson 2005, Morrissey and Verschoor 1995). Johnson (2005) states that 'if policies are voluntarily adopted [3]by a country and if those policies are expected to be fully implemented and sustained, then traditional policy based conditionality is not necessary for timely repayment of the money borrowed from the IMF, the World Bank or any other creditor' (Johnson 2005:2).

From the previous it appears that in the second perspective of ownership the focus is specific at central government level and the goal of ownership is to create commitment at central levels whereas in the first perspective, the focus can be at different levels and the goal of ownership is to develop capacities. As pointed out before, the goal of this study is to gain better understanding of local government monitoring, support to community managed water systems. It has also been pointed out throughout chapter 2 and especially section 2.3.2, that the presence of certain capacities is a condition for monitoring and support. Since the focus in this study is not the central but the local government level and since the goal of the study is to analyze the relations between local government ownership and their institutional capacities for monitoring and support, the first perspective to ownership will be adopted to assess local government ownership later on in the two cases. However, the second perspective and thus central government ownership will also be considered during the analysis of relations between local government ownership, institutional capacity to support and monitoring. The first reason is that reforms, policies and programs at central government level determine the framework of development including the goals, the principles, the instruments and the allocation of resources and responsibilities at local government level. The second reason is that, as the studies above assert, the process in which the framework of development is formulated, affects the central government's commitment to implement the reforms and policies and thus also determine processes at the local government level.

[2] Structural Adjustment Programs are World Bank Programs with the two most important components being liberalization and privatization. These policies were put as conditionality on the provision of loans.
[3] Voluntary adoption is defined as ownership by the author.

3.2 Framework to Analyze Local Government Ownership

In this study, the following definition of an 'owner' is adopted 'owner is the actor who ' influences the content of a development agenda and takes the lead in the implementation of that agend a' (Saxby 2003:2).In the following sub sections, a framework is presented to assess when a local government actor is the owner of a water project. For this purpose, the concept of participation used and sub section 3.2.1 describes ownership can be establis hed in a water project through participation. Sub section 3.2.2 describes how central government ownership of a reform, a policy or a program can be assessed. And finally, sub section 3.2.3 considers what roles and responsibilities can be given to local go vernments in reforms and policies.

3.2.1 Local Government Ownership through Participation

Participation is defined as 'the process through which stakeholders' influence and share control over development initiatives, decision, resources which affect them' (World Bank 1996: Online Sourcebook). Using this definition allows one to use participation as the instrument to influence and to share control in a water project and thus establish ownership over a project. However, when using this concept it must be taken in to account that participation does not ensure equal influence (Blair 2000) and hence not all participation automatically leads to more ownership. This section describes how influencing and leading can take place through participation in a water project and for this purpose Cohen and Uphoff (1977) are used who have formulated a framework of participation. Cohen and Uphoff are pointed out as being very influential in the identifying the key stages of the project cycle in which participation should occur (UNDP 1997; Chapter 1.2). It must however be noticed that their framework is adapted to make it more suitable to assess local government ownership in a water project. The major difference in their interpretation and the use of participation in this study is that Cohen and Uphoff are concerned with participation of community members in projects and not the participation of institutions as local governments.

Projects are defined as the basic instruments trough which externally supported development initiatives with a number of key and commonly recognizable phases (UNDP 1997: chapter 2.4). These phases are the pre planning (comprising project identification, project design), planning, implementation, monitoring and evaluation and impact assessment. In this study ownership is concerned with influence over the period before a project is completed and therefore the monitoring, evaluation and impact assessment stages are not considered. Participation can take place during these different phases. In each of these phases, participation by actors can occur in different forms and these are distinguished as participation in decisions , participation in responsibilities and participation in interactions.The decisions in a project can be divided in to the initial, design and operational decisions (Cohen and Uphoff 1977:31). The initial decisions are related to the identification and definition of a problem, prioritising local needs, setting goals and deciding whether or not to take action to solve the defined proble m. The design decisions are related to where, how and who questions (Cohen and Uphoff 1977: 33 -35) and to this the 'what' question is added. Design decisions are about which actors participate in the different phases of the process, what the responsibiliti es of these actors are and how the process of planning and implementation will be carried out including the procedures and institutional arrangements. And finally the operational decisions are about membership and the procedures for management. There is participation in a decision when the actor has the last word over a certain decision.

Cohen and Uphoff also distinguish the 'how of participation' and in this study this is referred to as the 'participation in responsibilities'. When an actor has a leading role or a leading role together

with another actor, the participation in responsibilities is considered as high. The existence of a leading role is determined by the question whether the actor takes initiative to carry out activities in a project and whether the actor has key responsibilities like managing, coordinating, supervising and the solving of problems that occur during the process. Having such key responsibilities implies a leading role and also the provision of support to the actors who carry out key responsibilities. The role of an actor is less important when an actor is consulted and finally the role is not important when the actor is only informed. An actor is consulted when the actor has the opportunity to give suggestions and concerns on a certain issue although there is no guarantee that their input will be used. An actor is informed when there is only a one way communication about an issue and the actor does not have the opportunity to make comments (UNDP 1997: Chapter 1.2).

Participation in interactions in each phase can refer to different things such as attending meetings, exchanging of information through sending or receiving reports, attending workshops. Previously it was mentioned that being consulted or informed is in indication of participation in decisions. However, being informed or consulted is often inherent to processes of interaction. To make sure that the participation in interactions and participation in responsibilities are considered separately, participation in interactions will only refer to the quantity of interactions and its importance. With 'importance' it is meant that the significance of the interaction can only be determined by considering its context. Next, the previous framework is applied to a water project and thus the following sub sections outline what participation in decisions, responsibilities and interactions implies in the context of a water project.

3.2.1.1 Ownership of a Project

Ownership of a water project takes place in the pre-planning phase and it is concerned with the question which actors influence the broader outline of a project before it is actually designed and implemented. In this phase, initial decisions are taken and in a water project these are about identifying that there is water related problem in an area, deciding that this problem should sold through a water project and selecting towns or communities where the water project will be implemented. Design decisions in the pre planning phase are related to the principles to be applied in the project, the allocation of responsibilities during project planning and implementation and the procedures to be applied during implementation. Participation in responsibilities is about who takes the initiative and leads the processes of identifying, prioritizing water issues and to improve the water situation.

3.2.1.2 Ownership in a Project

When formulating the broader outline during pre planning, actors decide and formulate who will have ownership in a project. Ownership in a project is about the planning and implementation phase and is concerned with the questions who takes the responsibility in the process, who is involved, how is their involvement and do they influence the decisions made in the process?

Design decisions during planning phase refer to technical decisions on the water technology, allocation of the water facilities in a certain area, the service levels and the tariffs for which the water will be sold. If it is not already determined during the pre-planning, the selection of actors to make the technical design, to construct the water system and to provide development assistance could also take place during the planning phase. The operational decisions are usually taken during the planning phase and these relate to local institutions such as CBO's, their composition, the

management options, institutional arrangements and the formulation of the procedures for operation and maintenance of the water systems.

During the planning, various responsibilities need to be carried out to establish comm unity management. First of all, the community needs to be informed and prepared for the project which is referred to as *community mobilization*. The concrete tasks in this process are for instance organizing community meetings, establishing a CBO's and trai ning its members. Another responsibility is the *technical design* of the water system. The concrete actions in this process are carrying out hydrological and socio economic studies which provide information on what is technically possible in a certain area and what is the willingness and ability to pay for water services among community members. This information is to be taken in to account when technical designs are made and technical designs are supposed to be discussed with the community members. *Tendering and procurement* is the process of searching, selecting and contracting private actors to carry out the construction works. Responsibilities in this process are to prepare tender documents, launch the tendering, receiving and evaluating the bids. Once the project is implementation is complete, meaning that the physical infrastructure is constructed and community is prepared, the CBO takes the responsibility for the functioning of the system and the delivery of water. That is when the post-construction phase starts.

3.2.2 Central Government Ownership of Development

Central government ownership is concerned with broader and more influential development efforts. It deals with the questions that initiated, formulated and took lead in these efforts. Development efforts can refer to reforms, policies or programs that provide the framework of principles, goals, procedures and responsibilities that are relevant in the areas for which reforms, policies etc. are designed. This framework, in turn, affects how proje cts are planned and implemented but it also how monitoring and support to communities takes place. It is therefore important to take in the account this framework in the analysis later on. First, it needs to be clarified when a central government 'owns' th e broader framework of development.

As shortly touched upon sub section 3.1.1, for the authors Johnson and Wasty (1993) and Killick (1998), central government ownership implies that the content of reforms or programs originate from government actors who agree and prefer the choices made regarding the contents. According to these authors, central government ownership over a reform or a policy is constituted when 1) a problem is identified and a policy or a program is initiated by the central governmen t and its content is formulated with broad participation of country stakeholders; 2) key policy makers agree on the nature and the causes of the problem and the selected solutions; 3) the government seeks support for the reform or the policy outside the ce ntral government and there are efforts for consensus building and; 4) There are no disagreements or opposition for the reform or the policy from the side of the authorities (Johnson and Wasty 1993 and Killick 1998). In their empirical studies, these author s found a significant positive relationship between country ownership, government actors' commitment to implement and successful implementation of programs.

Other authors have a different perspective on how central government ownership can be constituted. In the point of view of Johnson (2005), it is irrelevant who formulates the content of a programme and he claims that ownership is created when a government's actors are heard in the design and planning of a programme and they have the freedom and the ab ility to adopt the programme without coercion (Johnson 2005:3). For Morrissey and Verschoor (1995) government ownership does require that the content of a policy originates from a government's actors but at

the same time they claim that government ownership as such is not required for successful implementation because preferences can be shaped trough so called 'hierarchical learning'. Hierarchical learning implies that external agencies encourage country actors to accept, prefer and prioritize certain issues by providing them information on alternative policies and on how these policies have been working elsewhere. The preference and acceptance by a government's actors, the authors claim, will create commitment to implement a reform or a policy even when they do not own its contents. However both the claims Johnson (2005) and Morrissey and Verschoor (1995) are not based on empirical studies[4]. Their interpretations suggest that ownership is used as a 'softer' way to induce donor preferences on country actors, without being coercive as is the case with using conditionality. In theory, the adoption of a policy by a government's actors could be interpreted as the acceptance of and preference for a policy. It is however difficult to determine on the issue of coercion when a country and the government actors are highly dependent on external resources such as finance, information and knowledge and thus the government actors do not have a choice but to accept the externally introduced policies. In such a case, the statement of preference and agreement by the country actors does not constitute ownership but is merely an appearance of it.

Because, contrary to Johnson (2005) and Morrissey and Verschoor (1995) who do not base their assertions about ownership on empirical studies, Johnson and Wasty (1993) and Killick (1998) base their assertions on ownership on empirical studies and therefore their definition on central government ownership is adopted for this study. But there is also a normative reason to adopt their definition because it is seen as desirable that a government's actors formulate and influence the content of the development of their own country rather than being influenced by external actors trough 'hierarchical learning'. Therefore, if there are indications that the initiation and the formulation of a program is influenced by other actors than the government actors and there is at the same time unequal dependence of a government on external resources, no clear conclusions can be made on level of central government ownership. When reforms, policies and programs are adopted with conditionality attached to loans, the conclusion will be that there is no central government ownership because then the content of reforms probably originates from external actors and the adoption is not necessarily based on agreement and preference but on dependence. Another indication for a lack of ownership is when central governments' goals and intentions to implement a policy appear to be different than what is actually formulated in the policies.

3.2.3 Local Government Ownership in Development

In order to understand processes in a specific project, the framework in which a local government operates, needs to be analyzed as well. This framework prescribes the local government ownership in development: that is their roles, responsibilities but also the institutional arrangements, principles and procedures according to which they are functioning. As indicated earlier, reforms

[4] Morrissey and Verschoor (1995) do give the example of Uganda. They claim that during the 1990s the Ugandan Government showed great commitment to economic liberalization reforms which were not 'owned' by the government but which were formulated through 'hierarchical learning'. Donors had 'influenced and shaped the preferences' of the Ugandan government actors through the provision of information and support and these reforms were implemented successfully. The authors also claim, that pro poor policies that were 'owned by the Ugandan Government but these were despite government ownership not successfully implemented. These examples however are not convincing enough to conclude that ownership is not needed for successful implementation. First of all, liberalization reforms being preferred by donors might have correlated with more support by these agencies for successful implementation. Secondly, the authors themselves state that external consultants had a large influence on the formulation of the pro poor policies hence government ownership is not as high as the authors claim. And third argument against their claim is the weak administrative capacities in Uganda as pointed out by the authors, was likely an important constraint for successful implementation of the pro poor policies.

and policies in a country determine this framework and s ome reforms and policies put more power and responsibilities in the hands of local governments than others. Since the end of 1980's, decentralization reforms have been introduced and promoted in many southern countries and these are probably one of the most important developments that determine the extent to which a local government is supposed to have ownership in development. Decentralization, which is can be defined as the transfer of authority to plan, make decisions or manage public functions from the national level to any organization or agency at the sub -national level (Schou 2003:13). There are different forms in which decentralization could take place and here, only two forms are pointed out which are the political and administrative decentralizatio n. Political decentralization entails that resources, functions and authorities at central government level are transferred to local institutions which are based on political representation. This type of decentralization is often referred to as devolution (Schou 2003). Administrative decentralization, referred to as deconcentration, means that tasks are delegated from the central to local government departments. With deconcentration, the central government does not lose their authority as with devolution be cause policies are still determined at the central level and the deconcentrated departments are responsible for the implementation of these policies. Another difference with devolution is that local government departments are not necessarily locally electe d representatives and that civil servants at the local government remain accountable to the central government (Schou 2003 and Unescap 2005).

The literature on decentralization suggests that decentralization is promoted with mainly two different intentions. Conyers (1983, cited in Mohan 1996:78) notes that during 1950's and 1960's decentralization was associated with the transition to independence and the desire to create democratic structures and popular participation. It was asserted that decentralizatio n leads to democracy by creating opportunities for local participation in decision making, in planning and implementation of development efforts and that decentralization leads to good governance because local structures will be more responsive and account able to local communities (Unescap 2005). It is however not clear whether these assertions were based on solid evidence and studies or were mere expectations. A different intention underlying to the promotion of decentralization is the idea that the use of public or private instruments should be based on efficiency rather than political ideology. Efforts of the World Bank are led by the ideology that markets are more efficient than governments and thus markets are preferable over public instruments in servi ce delivery. In a World Development Report it is stated that 'p ublic sector should exploit the benefits of market economy and in this light decentralization should be seen as part of a broader market surrogate strategy' (Mohan 1996: 78, CCODP 2005:2). When introduced from this perspective, decentralization does not intend to increase local governments political power but to reform local governments in to facilitators, regulators and subsidizers for the private sector (CCODP 2005:9). As follows from the previous, reforms and the following institutional framework of a country will provide local governments more ownership in case of devolution and when intentions to decentralize are democratization and good governance. Whereas a local government's ownership is likely to be less in case reforms and the institutional framework in a country is based on deconcentration and when the intentions to decentralize are administrative efficiency and the preference of private over public service delivery.

3.3 Conclusion

This chapter answered the questions what local government ownership and central government ownership are and what a water project is. For this purpose, two different perspectives have been presented to analyze ownership and a description is given on h ow ownership can be constituted for the given definition.

In the first perspective, ownership is considered as identifying, designing and leading the implementation of development interventions and these actions are seen as part of capacity development of the owners. In the second perspective ownership defined in terms of accepting and preferring a development intervention by central government actors with the assertion that this creates commitment among government actors for implementation. In this persp ective, ownership is seen as a principle that can replace traditional aid conditionality. However for both perspectives there are no objective standards to determine what exactly constitutes ownership and the way ownership is measured depends on the underl ying intentions of authors.

Because the development of capacity trough interventions is more related to the questions and the purpose of the study, this perspective is used to specify the framework to analyze ownership in the case of Ghana. Therefore local government ownership will be perceived as constituted when a local government influences the content of a development agenda and when it takes the lead in the implementation of that agenda. A water project is an example of a 'development agenda'. Influencing and leading a water project can be realized trough participation in the interactions, decisions and the responsibilities during the pre-planning, planning and implementation of the project. But because the nature of influencing the content of a proje ct varies between the pre planning and the planning or implementation, two dimensions of ownership are distinguished in this study. The first dimension is ownership <u>of</u> a project and this will refer to a local government's influence over the broader outline, usually during the pre-planning of a project when the problems, goals, principles, areas for intervention are defined and the roles, responsibilities and the procedures for the planning and implementation are determined. The second dimension is ownership <u>in</u> a water project and this will refer to a local government's actual roles, responsibilities and influence over decision during the planning and implementation of the project.

In order to have a more complete understanding of local government ownership and its possible effects on monitoring and support, the broader framework in which interventions like projects are implemented, needs to be considered as well. Important constitutes of the broader framework are reforms, policies and programs in a country. A conclusion in several studies in the 1990's has been that central government ownership of these reforms, policies and programs is an important determinant of the commitment at central government for their implementation. Therefore, the central government's ownership of reforms, policies and programs relevant for the water sector will be taken in to consideration during the analysis of the case Ghana. In the studies mentioned above, central government ownership was said to be in place when the content of certain reforms, policies and programs were originating from and influenced by the central government but also that government actors agreed on and preferred the contents of that reform or the policy. When reforms and policies are formulated through donor conditionality, there is no central government ownership because their contents are determined and induced by external actors and government actors do not necessarily agree on or prefer their contents. In case reforms and policies are formulated through 'hierarchical learning' which means that external actors try to shape the preferences of a government's actors, no certain conclusions can be made on central government ownership because then it is difficult to pinpoint to what extent a government's actors i nfluenced

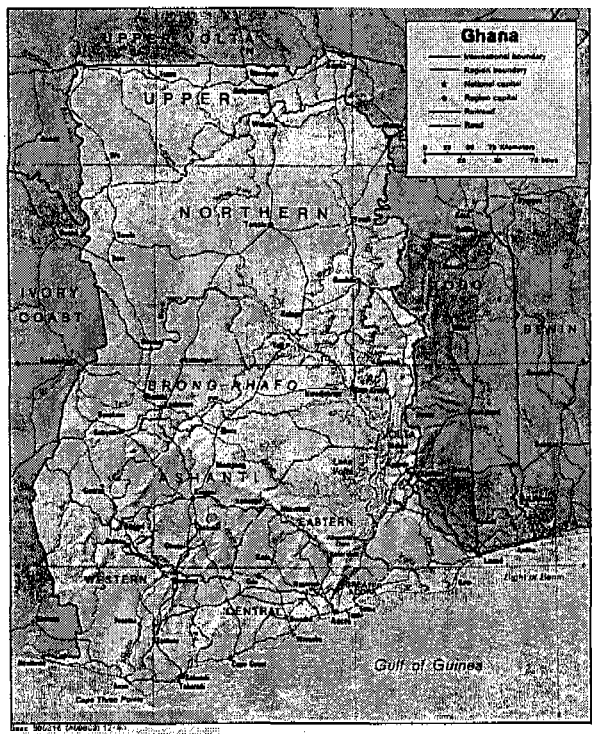
the content of reforms and policies and whether adoption was based on agreement and preference or on dependence and a lack of choice. The second aspect of the broader framework that will be considered in the analysis is the local government owner ship in these reforms. This refers to the roles, responsibilities and the decision making power given to local governments and the institutional arrangements and procedures according to which local governments are functioning and especially decentralizatio n reforms have been of great influence on local government ownership. Devolution is the most far reaching form of decentralization in which local governments have political and administrative powers and therefore in cases of devolution local government ownership over water projects is likely to be relatively high. Deconcentration implies that local governments are less autonomous and only have administrative responsibilities without political power and therefore local government ownership over a water proje cts is likely to be low in case of deconcentrated state structures.

4. BACKGROUND INFORMATION TO THE CASES

4.1 Introduction to Ghana

Ghana is a West African country with a total land area of approximately 239.00 0 square kilometres. Ghana shares borders with the countries Burkina Faso, Togo and the Ivory Coast and has the Atlantic Ocean on the south. In the year 2005, Ghana ranked at 138 from a total of 177 countries on the Human Development Index which indicates that, according to this specific way of measurement, Ghana belongs to the poorer countries in the world (UNDP 2005). The Ghanaian economy is predominantly rural and agriculture makes up 35% of the economy (DANIDA 2005).

Map 1: Ghana



Source: http://www.africa.upenn.edu/CIA_Maps/Ghana_19845.gif

In 2005, the Ghanaian population was estimated at 21 million with an average population growth of 2.2% (DANIDA 2005). According to official estimates 44% of the population lives in urban areas and 56% lives in rural areas and small towns (MoWH 2005). However, the n umbers that different institutions provide on the socio-demographic characteristics in the last two decades, including the water coverage, give a confusing picture because the variations in the given numbers are too big. According to official estimates in 2005, the total access to water facilities in small towns was 46% and urban access to water facilities was 54% (MoWH 2005). As a result, people in rural areas are still, dependent on natural water sources. Especially in rural areas, people still acquire water from rivers, streams, ponds and wells and this water is consumed without treatment (Mensah 1998). The Government of Ghana (GoG) states to be committed to the achievement of the Millennium Development Goals (MDG's) and has set their goals even beyond the MDG

targets[5]. In the national Strategic Investment Plan (SIP) for water it is envisaged that by the year 2015, 85% of all Ghanaians will have access to water services (CWSA 2004a). To achieve this target, the estimated investments cost both for infrastructure and capacity development is estimated at US$756 million (SIP 2004: 37). In rural areas and small towns, most water facilities are constructed with donor projects. These projects are ideally to be implemented in the framework of the National Community Water and Sanitation Programme (NCWSP). In the year 2005, approximately 40% of rural population was participating in the NCWSP (En gel et al. 2005: 17) and this number is likely to increase in the coming years as more projects are being implemented under this programme. Because more and more rural communities are becoming responsible for their water management, it is of relevance to s tudy how communities are managing their water supply, what kind of problems they come across and to what extent communities are being monitored and supported by other institutions like the local government and private actors. Having stated this, in the following chapters two projects are analyzed in depth but first a short description is given of the institutional framework of the Ghanaian rural water sector.

4.2 Institutional Framework for Rural Water Supply

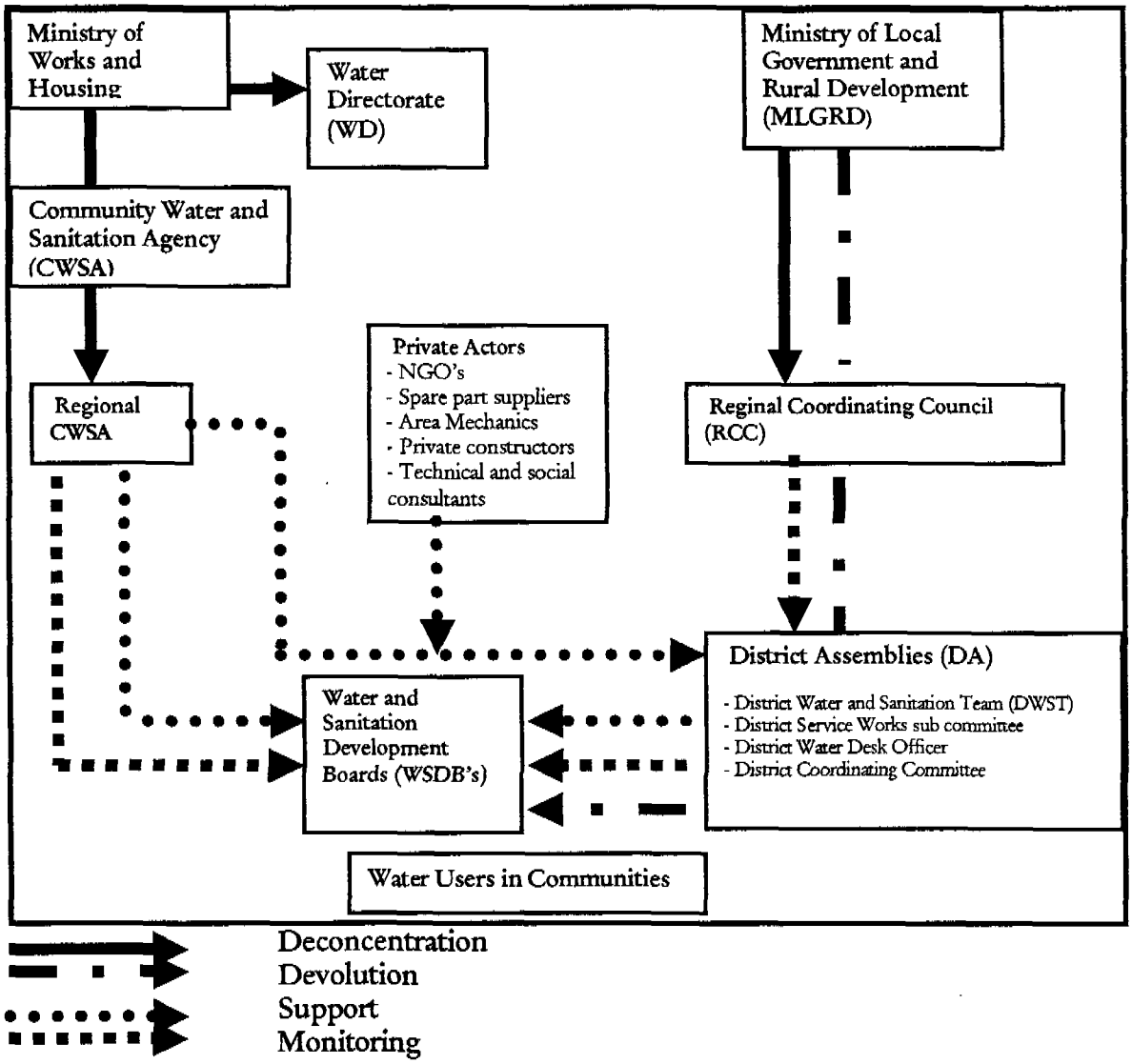
The focus in this study is specifically on the rural water sector in Ghana and hence the aspects relevant to the urban water sector are not touched upon in the presented institutional framework.

At the central level, the Ministry of Local Government and Rural Development (MLGRD) is responsible for policies and programs for an efficient administration of local government structures and for policies and planning for sanitation. Its relevance for the water sector is that District Assemblies (DA's), which are the local government institutions and which have a mandate for water supply, fall under the responsibility of the MLGRD. Through their Regional Coordinating Councils (RCCs) the MLGRD coordinates and gives guidance DA's. The Ministry of Works and Housing (MoWH) and the Water Directorate (WD) are res ponsible for the formulation of policies and strategies for water supply and sanitation and they also coordinate, monitor, and evaluate these policies and strategies. The Community Water and Sanitation Agency (CWSA) is the MoWH department responsible for r ural water. The CWSA formulates the guidelines and standards for water supply and try to ensure that actors active in the water sector comply with these guidelines and standards. The CWSA is also responsible for the coordination and facilitation of the implementation of NCWSP which is, as indicated earlier, the national strategy to rehabilitate or construct water supply and sanitation schemes and it is implemented through donor funded projects with a community management approach. Since the CWSA formally ha s a facilitating role, the agency has to work trough different actors such as donors, NGO's, private actors, community based organizations (CBO's) and DA's. The CWSA works through their regional offices, the R - CWSA's, which are present in all the regional capitals. According to national policies and guidelines, the CWSA first agrees with donors to implement a project which is then promoted among the districts in selected regions. DA's that are interested apply to participate in the promoted project where af ter the CWSA together with the relevant RCC select which DA's are

[5] During the United Nations (UN) Millennium Summit in September 2000, representatives from 189 member states of the UN adopted the Millennium Development Goals (MDGs). MDG's are development objectives related to poverty, hunger, education, health, gender and sustainable development and for each goal, specific targets have been set. Most of these targets are to be achieved in 2015 using the year 1990 as the baseline. Under MDG 7 ('Ensure Environmental Sustainability') one target is to halve by 2015 the proportion of people without sustainable access to safe drinking water and sanitation.

eligible for funds and thus will participate in a certain donor project. Ghana has 10 Regions and 110 Districts with 287 small towns all together. Each district has its own DA which is t he focus of local development and each DA is headed by a District Chief Executive (DCE). The DA's have the mandate for overall planning and also for water supply. Each DA has its own District Water and Sanitation Team (DWST) trough which communities are monito red and supported. It is legally possible that a DA delegates its responsibilities to other actors such as CBO's or the private sector and in practice DA's often delegate their responsibility for the management and control of water supply to CBO's which are in small towns called the Water and Sanitation Development Board (WSDB) which are supposed to be established with assistance from DWST, R -CWSA's. Delegation to a private operator is highly exceptional and during the visit there were only a few pilot projects where this had been the practice. But even in case of delegation, DA's keep the legal ownership and retains the power to approve plans and tariffs. Following scheme summarizes the institutional framework in Ghana.

Figure 1.Institutional Set up of the Ghanaian Water Sector



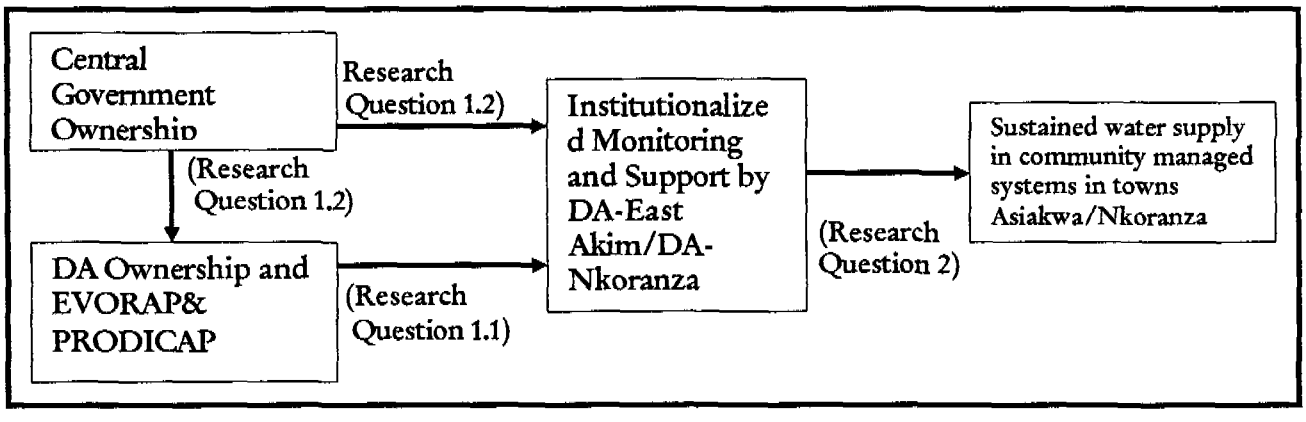
The coming two chapters 5 and 6 describe the selected projects EVORAP and PRODICAP in the towns Asiakwa and Nkoranza. Each case starts with an introduction and is then divided in to two parts. The first part assesses DA ownership through describing the participation of DA in the different phases of the project and the second part describes the conditions for mon itoring and support to the communities and for sustained water supply. In chapter 7 first the Ghanaian government's ownership in decentralization reforms and water sector reforms are assessed and there after the local governments' roles and responsibilitie s and their capacities to carry out responsibilities are described. Table 3 gives a summary of the analytical framework to be used. Below in figure 2 a schematic overview is given of the questions that are trying to be answered in the following chapters. The final conclusions are given in chapter 8.

Table 2: Overview of the Analytical Framework and the Case Ghana

ANALYTICAL FRAMEWORK	EVORAP AND PRODICAP	GHANA
Ownership as a Development Principle *(Chapter 3)* Owner is the party that influences the content of a development agenda and leads the implementation of that agenda. **Analyzing Local Government Ownership** *(Section 3.2)* - Local Government Ownership of a Water Project *(sub section3.2.1.1)* - Local Government Ownership in a Water Project *(sub section 3.2.1.2)* - Central Government Ownership of Development *(Sub section 3.2.2)* - Local Government Ownership in the Water Sector *(Sub section 3.2.3)*	**The EVORAP and PRODICAP projects** *(Chapters 5 and 6)* These chapters describe EVORAP in the town Asiakwa and DA-East Akim and PRODICAP in town Nkoranza and DA-Nkoranza **DA ownership in and of the water project** *(Sections 5.1 & 6.1)* - DA Participation in Pre Planning, Planning and Implementation - DA Participation in Interactions - DA Participation in Responsibilities - DA Participation in Decisions	**Water Sector Developments and Ghanian Government Ownership of the Developments** *(Section 7.1)* - Decentralization *(Sub section 7.1.1)* - Water Sector Reforms *(Sub section 7.1.2)* **DA ownership and the water sector** *(Section 7.2)* - DA roles and responsibilities in decentralization and water sector reforms *(Sub section 7.2.1)* - DA Responsibilities in Practice *(Sub section 7.2.2)*
Community Management and Sustained Water Supply *(Chapter 2)* Principles in community management are demand responsiveness, community participation and control. Sustained water supply implies that systems are functioning and deliver adequate amount of benefits accessible to community members.	**Water Supply System in Small Town Asiakwa and Nkoranza** *(Sections 5.2 & 6.2)* - Technical Conditions - Financial Conditions - Organizational Conditions	**Water Supply in Community Managed Systems in General** *(Section 7.3)* - Technical Problems - Financial Problems - Institutional Problems

Conditions for Sustained Water Supply *(Sub section 2.2.2)* - Technical Conditions - Financial Conditions - Organizational Conditions - Institutional Conditions		
Institutionalized Support and Monitoring *(Section 2.3)* Monitoring and Support on Technical and Administrative issues **Conditions to institutionalize monitoring and support** *(Sub section 2.3.2)* - Regulatory Framework/Rules that set out roles responsibilities and procedures - Capacities to carry out roles, responsibilities, procedures - Actual support and monitoring carried out in practice	**DA monitoring and support to WSDB's** *(Sub sections 5.2.2 & 6.2.2)* - Rules and Plans that set out DA roles and responsibilities for technical and administrative monitoring and support. - DA capacities to monitor and support	**DA monitoring and support to WSDB'** See under *(Sub section 7.2.2)*

Figure 2. Schematic Overview of the Questions



CASE 1

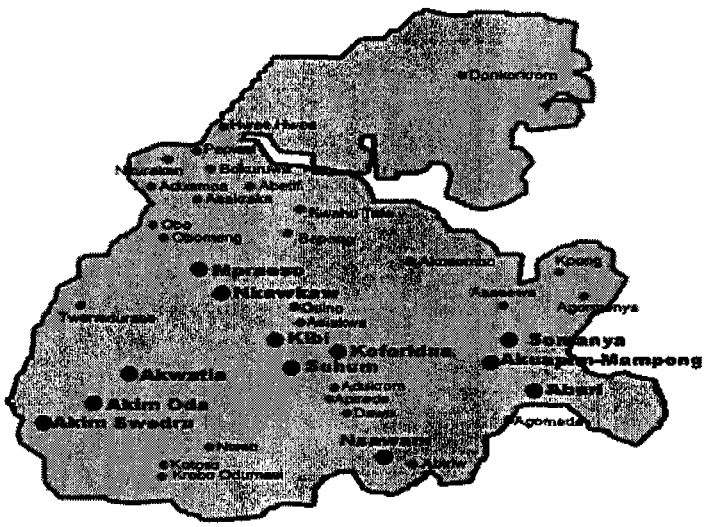
5. EASTERN and VOLTA REGIONS ASSISTANCE PROJECT (EVORAP)

5.1 Introduction to EVORAP and Small Town Asiakwa

In this chapter first the Eastern and Volta Regions Assistance Project (EVORAP) p roject is analyzed as a case and secondly the conditions of the water supply system are considered in section 6.2.

This project has assisted 33 small towns in the Eastern and Volta Regions with the implementation of piped water systems. The specific focus here is on the small town Asiakwa in the Eastern Region. The Eastern Region (see below map 2) has a population of 2.1 million which is 11.1% of the population and the region covers 8, 1 % of the total land area. In December 2005 the recorded numbers of water facilities in the region were 1858 boreholes, 1140 hand dug wells and 14 pipe systems (TREND 2004b). Of all the households in the region, 23.6% still use rivers, streams, ponds or lakes as their main source of drinking water, 23% use hand dug well[6]s and 8.8% have household connections. The rest of the households depend on pipe borne water which can be located near of far from the houses.

Map 2: Eastern Region



http://www.onetouch.com.gh/ot_coverage/coverage_ghana_details.asp?link=coverage&tlink=coverage&covId=5

Asiakwa falls under the jurisdiction of the East Akim District Assembly (DA). In the year 2000, Asiakwa had a population of 8973 and it is expected that the population will rise up to 12058 in the year 2010 (GSS 2000). Before the pipe system was constructed with the EVORAP project in 2000, one of the main water sources in Asiakwa was the river Supon which is approximately a mile away from the centre of the town. Addition al sources to river Supon were 17 wells, 1 borehole with a hand pump and the river Twafor, the pond Asawansua and a stream near the town (FMP

[6] Hand dug wells refer to ground water sources where water is acquired from less 20 meter deep and which is dug with simple tools and techniques. One hand dug well can serve approximately 200 people.

Asiakwa 2000). In the last fifteen years, the surface water surrounding the town has been polluted as a consequence of urbanization and also the amounts of water have decreased due to climate change. There used to be a mechanized pipe system in the town which was constructed in 1956 and rehabilitated in 1970. This pipe system had broken down in 1994 and handed over fr om the GWSC to the East Akim DA in this condition. Probably due to a lack of financial and organizational capacities, the DA could not take the responsibility to rehabilitate this system and the residents depended on other sources of water. To improve thei r water situation, Asiakwa residents decided to apply for funds to construct a new pipe system under the EVORAP project. Next sections describe how the EVORAP project was implemented in Asiakwa and the focus is the role of East Akim-DA in the pre-planning, planning and the implementation of this project. The main claim is that DA ownership of the content and the process in EVORAP project is minimal. Instead, the regional project staff, with support from the R-CWSA staff, had the leading role of the project.

5.1.1 Participation in the Pre-planning

EVORAP project was implemented in the framework of the NCWSP. The project started in 1998 with signing of two agreements. The first agreement was between the Government of Ghana (GoG) and the German Kreditanstalt fur Wiederaufbau (KwF) for financing water supply systems in a number of small towns in Eastern and Volta Regions. The second agreement was between the GoG and the German Gesellschaft fur Technische Zusammenarbeit (GTZ) for providing assistance in management and capacity building during the implementation of the project. The assistance from GTZ was funded by the German Government. CWSA together with GTZ formulated the project outline but very little information is obtained about this phase of the project. It is for example not clear whether the selected regions and districts were priority areas of the CWSA. GTZ presence in Ghana dates back to the 1960's and the agency is operating in the Eastern and Volta regions since 1995. The fact that GTZ was alrea dy operating in these regions is probably the reason why small towns in these two regions have been selected to implement the water project. It is likely that in general, the selection of project areas is determined by donors instead of being priority areas of the CWSA and this suspicion was raised by the statements of some respondents. As will become clear in the following sections, the principles and approaches used in the EVORAP project indicate that during the pre planning, CWSA's policies and guidelines were taken in to account.

After the project agreements were signed, regional workshops were held to promote EVORAP among districts in the two regions. Different stakeholders such as NGO's, DA's, consultants and government institutions attended these wo rkshops. During these workshops, actors were informed about the principles, procedures and the eligibility criteria of the project. In documents it is stated that the aim of these workshops was to create a common understanding of and to reach consensus on what problems should be addressed and on what the goals of the project will be. During the field visit, no specific information could be obtained on these workshops and the topics that were discussed. All DA's could apply for the project and in the Eastern Region and 9 of the 17 DA's that applied for the project, were selected as eligible by the R-CWSA/CWSA and the EVORAP project. East Akim is one among the nine districts selected as eligible to implement the EVORAP project. After being selected as eligibl e, the East Akim-DA and the CWSA signed a Memorandum of Understanding (MoU) which outlined the eligibility criteria, project principles, procedures, guidelines and the responsibilities of various actors. This indicates that the East Akim DA was aware of and accepted the project outline but it does not indicate anything about the real priorities of the DA regarding to the principles, procedures and so on. East Akim-DA did not have a plan

for water and sanitation when the EVORAP project was launched which cou ld have given us an indication of the priorities and approaches that DA had in the water sector at that time.

As required by the national policies, East Akim DA's had already established a DWST whose members could promote the EVORAP project in the small towns in East Akim and who could take up the overall coordinating role of the project. However, the DWST members had a minimal role in the project. Instead, the GTZ had established a regional office with a regional coordinator and extension staff, from now on referred to as the project staff. Several documents such as minutes of the project staff and the interviews conducted show that this project staff, with support from the R-CWSA staff, had a leading role in the promotion, coordination and the managing o f the project.

In cooperation with the R-CWSA staff, the project staff visited several small towns in March 1999 in order to promote the project and to assess their compliance to the eligibility criteria. Specific in Asiakwa, there have been consultations and discussion with chiefs, elders, opinion leaders and community members in Asiakwa on the acceptance of the project and the eligibility criteria. Based on this information, the small towns were selected by the project staff but no indications were found that the East Akim DA members were involved in the prioritizing and the selection of the small towns although it is their official mandate to do so. In April 1999, the nine small towns were selected and a forum was organized by the project staff to discus s common issues about the project and its implications for the coming time. This forum was attended by prominent actors in the small tows such as community leaders but also by DA and R -CWSA members. It was after this forum in May 1999, that in Asiakwa a formal meeting was initiated by the District Chief Executive (DCE) of East Akim to confirm acceptance of the project. Various stakeholders attended this meeting such as representatives of the chief, elders, opinion leaders, the project staff, DA members, Kelstone Ghana LTD and approximately one hundred participants from the community. It is difficult to pinpoint whether these stakeholders represented the various segments of the population and was gender balanced. In this meeting, the DCE highlighted once more the criteria to be eligible for project funds which were, among others, that Asiakwa citizens will contribute to 5% of the construction costs, the DA contributes another 5% to the construction costs and that a representative and gender balanced Water and Sanitation Board (WSDB) will be established whose members will become responsible for operation and management of the water facilities. There were no criteria on qualification of the members and thus in principle everybody could be nominated. It was at the end of this meeting that the present stakeholders decided that Asiakwa will construct a pipe system under the EVORAP project and that seven WSDB members were nominated. The outcomes of the meeting were formally reported to the chief and his elders. After a short while, a community meeting was organized by the project staff to approve the nominated WSDB members who represented different segments in the community such as the traditional authority, men and women, the DA and civil organizations. Several DA mem bers and the DCE were present during this meeting when the nominations were approved and the WSDB officially established. Now, the activities could start in order to prepare the WSDB for their responsibilities during and after the project. One of the first WSDB responsibilities was to mobilize 5% of the construction costs within the community. WSDB faced difficulties to collect the required amount of money and the DA had an important role in supporting the WSDB on this matter. The WSDB also received a signi ficant amount of money from Asiakwan citizens who lived in Great Britain. But the DA itself also had difficulty with meeting the required 5% of the construction costs. Although it was with difficulties, finally both the DA managed come up with the amounts of money required.

From the beginning on, relation between the Asiakwa community, the WSDB and the DA has been very positive. In one letter to the project staff, WSDB members states *'As regards our relations with the DA, we would say it is most cordial. Besides the Assemblyman for Asiakwa being a member of this Board, it was the DCE himself who called for and was present at the meeting at which the board was set up. Aside of that, the Assembly per the DCE has promised to assist the Board whenever the need arises and it is called upon* (Letter from WSDB to project staff to apply for the project, May 99). Assisted by the project staff, the WSDB opened 2 bank accounts: one for future recurrent incomes and costs and another for future replacement and rehabilitation. The rehabilitation account is opened by the DA and WSDB implying that rehabilitation is seen as a joint responsibility of WSDB and the DA. Throughout the pre-planning process, R-CWSA had a supervising role and regularly received documents from the project staff and the WSDB on the progress. The following sub section sets out the planning process of the project specific in Asiakwa.

5.1.2 Participation in the Planning

The process of project planning can be divided into the managerial and technical planning. The first is the formulation of the Facilities Management Plan (FMP) and took approximately one and a half years and which has been lead by the EVORAP project. In this period, the WSDB assessed the different management options such as direct and indirect management with assistance from the project staff. From various documents it is clear that the project staff preferred the WSDB to select the indirect management option. First, the WSDB had considered the indirect management option, implying that the management, operation and maintenance responsibilities would be delegated to a private company called KELSTONE, trough a contract. The WSDB's responsibility would be the supervision of this private company. However the WSDB, in consultation with the community, chiefs, elders and the DA chose for the direct management option meaning that WSDB would recruit and employ its own staff for the day to day administration, operation and maintenance. This staff would be paid a monthly salary and be under the direct supervision of the WSDB. Once this was decided, the project staff assisted the WSDB in the formulation of the FMP which set out the roles, responsibilities for the WSDB members, the technical staff and the DA but also the institutional arrangements for management and supervision. One of the findings was that the FMP's for most of the EVORAP towns were almost identical and also the by laws which are meant to establish WSDB as a legal entity. The FMP was officially approved by the DA/DCE in March 2003. Although the FMP indicated the chosen tariffs to sell the water, a separate agreement was signed by the DA to give official approval for the tariffs proposed by the WSDB. In this agreement it is stated that *'this is an interim measure and can be changed as and when the WSDB in conjunction with the entire Asiakwa community deems it fit to do so'.* The WSDB members and the staff first attended a three day training and secondly a 5 day more in -depth training and workshops according to their needs (EVORAP 2006). A major emphasis during these trainings provided by GTZ was on the use of several tools on issues such as operation, maintenance, record keeping and financial monitoring. These tools were specially developed for the EVORAP project.

The responsibility for the technical design of the schemes in all small towns participating in EVORAP was carried out by two consultants named HydroPlan and Fosat consult. These consultants were contracted by the CWSA but direct contract supervision was done by R -CWSA. The consultants carried out a baseline study to gain information on community characteristics such as the socio-economic situation, income levels, water need and demand in the community and the preferences regarding to water services. Also hydrological studies were carried out to know more about the geological conditions. Based on information from previous studies and on CWSA's design criteria, technical designs were drawn for the water supply scheme in Asiakwa. What is

remarkable about the design is that after base l ine studies among all the small towns participating in EVORAP, all schemes have been designed for a water demand of 20 liters of water per household per day. This makes one doubt about to what extent the technical designs were according to specific demands and needs in 33 small towns.

Before the previously mentioned FMP and the technical designs were accepted, community meetings were held to discuss and approve these. The attending community members were consulted on the management options, the water tari ff, service options, and places to construct the public standpipes and the opening and closing times of the taps. However, no specific information could be obtained on who attended these meetings and what issues were raised by the community members but only the statement that both plans were accepted without any problems (Interview WSDB Asiakwa). The next step was the tendering and procurement of a private constructor to carry out the plans. It was the preference and the choice of KwF to contract one compan y for all the schemes in Eastern Region but it is not clear whether this was also a CWSA preference. As a consequence, the amount of the money for the contract to be awarded was high to the extent that both the DA's and R-CWSA did not have the mandate to d o tendering, procurement and to award contracts but the CWSA had to take up these responsibilities. Although this is not contradictive to CWSA's sector policy, in an interview a CWSA official stated preference for R-CWSA or DA's to do tender and procurement. The reasons indicated were that tender and procurement by DA or R-CWSA would be more according to the national decentralization policies and that CWSA should have a facilitative rather than an executive role. At the CWSA Headquarters, a tender committee was established comprising representatives from the CWSA, the R-CWSA's of Eastern and Volta Regions and project staff. The project staff prepared the tender documents and these were launched by the CWSA. Bids from private companies were evaluated by this tender committee which formulated an advice. This advice was sent to the KwF and CWSA who both had the final word in approving which company would carry out the construction works (Interview R-CWSA and minutes from project staff). In September 2002 the CWS A prepared and signed contracts with Geo-mechanic, a German company and with KADACON, probably a Ghanaian company, respectively for drilling the boreholes and constructing the schemes in the nine small towns.

5.1.3 Participation in Implementation

When contracts were signed between Geo-mechanic/KADACON and the CWSA, the contract management was delegated to the R-CWSA. Thus the R-CWSA became responsible for supervising these two companies and to make sure that they act according to the guidelines agreed in the contracts. However the companies were directly paid by the CWSA and in practice the day to day supervision of the contractor was done by HydroPlan (the German company who is also the consultant for technical designs) and monthly reports were written and se nt to R-CWSA. According to an R-CWSA official, the role of the DWST has been minimal in this process. He stated the CWSA is the client but represented the DA in the direct management of the contract. During construction works, monthly site meetings were o rganized by the R-CWSA to discuss progress of the construction. These meetings were attended by members from R-CWSA, DA, DWST, KADACON, Geo Mechanic and WSDB. This was the only involvement of DA/DWST in this process. There were also other meetings at regio nal level attended by R-CWSA of the two regions, Hydroplan and KADACON. And additionally, at the CWSA head office quarterly meetings were held to discuss the overall progress on the construction and the preparation of the WSDB and the community for future management. DA's were not present in these regional and quarterly meetings. When construction work was finished, the water scheme was handed over from the CWSA to the DA which became the legal owner of the system and responsible for the

operation and maintenance. The East Akim DA on their turn delegated the responsibility for operation and management to the WSDB with signing a bye-law but kept the legal ownership of the scheme. It must however be noted that during the visit to Asiakwa the WSDB still did not have legal status despite the signing of this bye law because this document was not passed to the MLGRD for official approval. Although lacking full legal backing, the WSDB started the actual operation of the systems in October 2003.

5.1.4 Sub Conclusion: DA Ownership and the EVORAP Project

In the case Asiakwa, the East Akim DA did not have ownership of the EVORAP project because information suggests that during the pre planning the DA did not have a leading role nor influenced the project outline and agreements. Instead the leading role in the pre planning was one of CWSA, KwF and the GTZ which is conform to the national guidelines. The project agreements were formulated and signed by the CWSA, KwF and GTZ in the framework of CWSA's national policies and principles. Though, there are some differences in the CWSA guidelines and the actual process of project planning and implementation which suggests that GTZ/KwF had requirements and preferences during the pre planning. These preferences or requirements were probably related to the selection of small towns, tender and procurement, DA/DWST roles and involvement and how monitoring should take place in the small towns selected. Considering the previous, it can be concluded that both the CWSA and the GTZ/KwF had ownership of the project.

DA Ownership in the EVORAP project can pointed out as to be low. Regarding to the responsibilities, except for the mobilizing the 5% of the construction costs in Asiakwa, DA/DWST did not have a leading role during the planning process. Instead, the process of community mobilization and contracting the private sector and the supervision of the construction were led by the project staff to a lesser extent the R-CWSA. However the DA/DWST participated in important interactions such as appointing the WSDB, the regional workshop, the community meetings and the monthly site meetings. The DA also approved the FMP and the tariffs and signed bye laws meant to provide the WSDB a legal status. It appears however that the DA did not influence the contents of these documents and their approval was merely a formality. The WSDB has been assisted by the project staff with setting tariffs and formulating the FMP and therefore the project staff has likely influenced the content of the plans and t he decisions taken. This expectation was underlined by the finding that FMP's and bye laws of other EVORAP towns were almost identical to each other. Other similarities among EVORAP towns are technical characteristics and arrangements for management and mo nitoring of the systems. It can therefore be assumed that the project staff as influenced and hence had a high ownership. Also R-CWSA ownership can be pointed out as high due to the fact they participated in most of the interactions and had a facilitative and supportive role for the leading project staff. Community members and the WSDB also participate in various interactions and gave approval on various issues such as the forming of the WSDB, the FMP, the tariffs and the technical designs. However, the co mmunity or the WSDB did not have significant responsibilities throughout the process. WSDB did have the responsibilites such as the formulation of the FMP but as indicated before, in carrying out their responsibilities, the WSDB members were highly influen ced by the project staff.

Table 3: East Akim DA Participation in EVORAP

	Responsibilities	Interactions	Decisions
Pre Planning			
Project Staff	Leading	Interactions with R-CWSA	Selection of Town
R-CWSA	Support		Selection of Town
DA	Informed		
The Community	Informed		Decide to apply for the project and Approve on WSDB
Planning			
The Facilities Management Plan			
Project Staff	Leading and supporting		
R-CWSA	Supporting Facilitation		
DA	Consulted	Community meetings few trainings	Approval
The WSDB	Consulted	Community meetings, all trainings, meetings with project staff	Approval
The Community	Consulted	Community meetings	
Tender and Procurement			
Project Staff	Leading		
R-CWSA	Leading		
DA	None	None	None
KwF/CWSA	Informed		Approval
Technical design			
Project Staff	None		
HydroPlan	Leading		
R-CWSA	Supervising and Support		Approval
DA/DWST			
Community	Consulted/Informed		Approval
WSDB	Consulted/Informed		Approval
Implementation (Construction)			
Project Staff	Informed	Site meetings	
R-CWSA	Jointly Supervising	All site meetings	
Hydroplan	Lead in Supervising	All site meetings	
DA		Some of the Site meetings	
WSDB			
The Community			

5.2 THE WATER SUPPLY SYSTEM IN ASIAKWA

This chapter describes the current situation on the functioning of the water systems and how likely it is that the systems will sustain functioning. For this purpose the conditions for sustained water supply is analyzed according to section 2.2 and 2.3.

5.2.1 Conditions for Sustained Water Supply

5.2.1.1 Technical Conditions

One of the most important determinants for the delivery of water in the system is that an adequate amount of water is available from the source. In the Asiakwa pipe system, the source is ground water which is pointed out to be very reliable throughout the whole year, even in the dryer periods. Each day the water can be pumped for 16 hours and the remaining 8 hours are required for the ground water to recharge. The system is supplied with water from one 59 meter deep borehole that is equipped with a submersible pump. This pump uses electricity from the national grid as a source of energy to pump the water from the ground, through transmission lines, up to the High Level Tank (also called the reservoir) which has a capacity of 180m3. The reservoir lies at the highest point in the town from where the water is distributed by gravity through a distribution network of pipes, to 19 public standpipes where people can buy water and there are additio nally 37 private connections spread throughout Asiakwa. Each standpipe is designed to serve 300 people.

The WSDB has hired **two technical operators** who are responsible for the daily functioning of the system. In the control panel where the pumping of the water is controlled there is a water meter tha enables the operators to read and record the amounts of water pumped through the system on a daily basis. The same is done with the water sold at the standpipes where also water meters are placed. This enables the board to keep an overview of the amounts of water pumped to and sold at the standpipes. At the time of visit, the system had been operational since October 2003 and no major problems had occurred yet with the reservoir or the pipes. During the project planning the WSDB and the project had selected 'Grundfos' submersible pumps for use and the reason to select this particular brand is pointed out to be the easy availability of spare parts of this brand (WSDB Asiakwa 2000). As was seen in the previous sec tions, the project staff had an important role during the project planning and implementation and they supported the WSDB in the selection of the technology. Grundfos is a Danish manufacturer with an annual production of 10 million pump units and has nation al companies in various parts of the world but not in Ghana. The spare parts are sold to Ghanaian local distributors through their company in South Africa (Grundfos website 2006). In case the WSDB has problems with the submersible pumps, they have to contact this local distributor. It is however not clear how many of these local distributors are available, where these are located and what their level of knowledge and skills are regarding the spare parts they sell. If the local distributor does not have a s olution to a technical problem, the WSDB will be relying on the technical expertise of the staff in South Africa which in practice would mean that the problem might not be solved. During talks and interviews it was already indicated that local technical sk ills and knowledge specific on submersible pumps is inadequate and that spare parts for submersible pumps are not easily available (R -CWSA officers). The chairman of the WSDB stated that when problems with the water pumping had occurred, they contacted a company in Accra but he also indicated this was very costly, especially because the technicians had to travel from Accra which is approximately two and a half hour drive. It was also indicated by several people that in the city Tema, which is as far as Accr a, there is a company called Divine Wisdom that can be hired if problems occur. GTZ and DANIDA are making joint efforts to solve

the problem of the lack of spare parts. Low supply of electricity was indicated as one of the recurrent problems. At the time of visit, the WSDB had just requested East Akim - DA to upgrade the current electricity supply but the outcome of this request is not clear. The system highly depends on electricity which might become a problem. Electricity is generated with water from the Akosombo dam and river- and this river is downstream from Burkina Faso. In the dryer periods or when consumption of water increases in both countries, the amount of water in the dam decreases and this affects the generation of electricity. As an alternative to electricity, in the FMP it is stated that solar energy was considered in the technical design as an option but that this would be financially unfeasible.

Because ground water in the Eastern Region has a good quality, it usually only requires little treatment which means a reduction in the operation costs. During the project implementation, the CWSA decided that all EVORAP towns will use chlorine tablets in stead of chlorine. Chlorine is pointed out as difficult to handle, not easy to obtain on the mar ket and leads to health problems if not properly used whereas chlorine tablets are simpler to handle, are maintenance free and are easily obtain in Ghana (HydroPlan 2002). Despite most ground water systems need little treatment; this is not the case for Asiakwa. Short after the system started to operate, water quality problems occurred and hydrological studies showed that the ground water contains high levels of iron which gave the water a bad taste and posed a threat to peoples' health. HydroPlan and the W RI conducted a hydrological study and advised the WSDB to build an iron removal plant which was subsequently done with support from R-CWSA and the project staff.

5.2.1.2 Financial Conditions

The bye law and the FMP give WSDB the responsibility to raise its own finance directly from water sales which implies that the WSDB has to set tariffs on a cost -recovery base. In the bye-law establishing the WSDB it is stated that *'the District Assembly may from time to time allocate funds through its regular budgetary allocation to support some aspects of the development (e.g expansion) of community water supply system'* but this is unlikely to happen due to financial constraints at DA level. The WSDB generates income through selling the water at the 19 public standpipes. At each standpipe there is one vendor who receives 10% of the incomes from the water he or she sells. WSDB's operational staff collects the money from the vendors and writes down the stand of the water meter every day in the record book. The money from private connections is collected on a monthly basis and all the money is handed over to the accounts officer who is in charge of keeping the income and expenditure records. The accounts officer deposits the money in to the current bank account which is used for issues on day to day operations. There is also a Reserve Fund Account at Kyebi Commercial Bank for the replacement, rehabilitation and expansion costs and a part of the revenues generated is put on this account. The third account is a savings account to w hich the surpluses from the current account are transferred (WSDB Asiakwa 2000). Every month, the accounts officer submits the records and a photo -copy of the bank accounts to the WSDB - Treasurer who checks the water consumption, the income generated, the e xpenditures and the bank accounts. At the time of visit, the arrangements for financial management and financial monitoring were very well in place.

Although the financial management was carried out well at the time of visit, this does not rule out future problems. One of the problems that might occur is the decrease in WSDB incomes while system costs increase. It appears that measures to cut down costs were for some issues not undertaken adequately and for other issues have not been effective. First indic ation is the expensive technology which might raise the costs in the future. As pointed out before, it is not

clear whether spare parts are available and whether these are affordable to the community. This is, besides the submersible pump, especially questionable for the iron removal plant. During talks with WSBD members it became clear that the iron removal plant constructed in Asiakwa is an expensive and a relatively advanced technology. Asiakwa was actually the first small town in Ghana where this technology was introduced. Although the WSDB members seemed proud about this fact, it is not clear how much maintenance this plant requires, what cost implications of the plant are and whether local expertise and spare parts on the technology are available. It is not clear either whether alternative iron removal plants were considered during the selection of the technology. Another aspect of the system that causes high costs is the use electricity as a source of energy to pump the water through the system. In the previous water system in Asiakwa, diesel was used as source of energy and although electricity from the national grid is far cheaper than diesel, electricity costs were mentioned as one of the highest expenses on the WSDB budget and that the board faces difficulty with meeting these costs. It is shortly touched upon before that in dryer periods and when the water consumption increases, this causes problems with generating electricity at the Akosombo Lake. In previous years this had even caused water and energy crises and conflicts with Burkina Faso. Considering the expected population growth in both countries and the subsequent increase of demand for water for domestic, industrial and agricultural use, it is likely that

Regarding to WSDB income there is sometimes resistance among individuals and government institutions such as schools and the town's hospital, to pay their water bills. This can create financial problems because, especially revenues from government institutions account for a high percentage of WSDB incomes. However, having difficulty with collecting revenues from individuals and government institutions is not unique to Asiakwa but is a common problem in many community managed areas in Ghana. On the late payment of water bills, the WSDB sends warning letters to those who make their payments late but the WSDB does not have legal status and can therefore not enforce payments. The reason why WSDB still had not acquired legal status is that the bye law to establish WSDB is signed by the DA but has never been passed to the MLGRD for final approval. A joint study by GTZ and CWSA actually showed that none of the DA's in the project towns had passed the bye laws to the MLGRD. There are also indications that the 'willingness' to pay is not very high among the Asiakwan citizens. In a report of a community assessment workshop, some attendants are quoted who point out that water provision should be a social service which should not have cost-effectiveness as its central goal. Additionally, people perceive the water price as too high and traditional sources such as rain water and the river Supong are still being used. This causes a decrease in water sells from the pipe system and thus a reduction in WSDB's income. The WSDB members stated that the problem of collecting revenues and the use of traditional sources of water is not due to an inability pay for water but due to difficulties to change people's minds and attitudes.

5.2.1.3 Organizational Conditions

The organizational arrangements for the WSDB and the related actors are provided in the Facility Management Plan (FMP) and the bye law as was explained in section5.1. The WSDB is the governing body with a chairperson, a treasurer and a secretary. During the field visit there were six board members in place representing different segments of the community such as the health sector, traditional authority, an organized women group and the DA. The three male and the three female members were all voluntarily on the board and received a sitting allowance in return for their efforts. The WSDB sets the procedures for issues such as service connection, revenue collection and sanctioning of defaulting water users. The WSDB also has various responsibilities

including the preparation of an annual budget, annually revi ewing the tariffs and to plan for rehabilitation, expansion or replacement of the facilities. As was indicated earlier, the WSDB has chosen for direct management of the water system meaning that operational staff [7] is hired that is under direct supervision of the board. This staff is responsible for day to day operation, maintenance and administration and the board directly controls and manages the staff. For this purpose, the WSDB and the staff meets once a month and the treasurer from the WSDB controls the records and audits the accounts once a month. Besides, the WSDB members also meet monthly amongst themselves. It has been previously indicated that with the monitoring tools introduced by EVORAP, records are kept on various issues on a daily basis. These records are summarized in to weekly and monthly records to be controlled by the Treasurer. After controlling the records, the Treasurer writes financial and technical reports which are sent to the project staff, the R-CWSA and the DA. Although the tools introduced by the project enable the staff and WSDB to keep and control records in a simple and systematic way, it is questionable whether the tools will be kept using over time considering that their use and control are intensive. The WSDB members and their staff had received various trainings to be able to use these tools which is likely a partly explanation of their effective use. There are however no arrangement to train future WSDB members to use of these tools.

With approval from the DA, the WSDB could decide to change from direct to indirect management trough contracting a private operator to be responsible for the management and control of the day to day operation, maintenance and administration and project documents clearly indicate that indirect management is more preferred by the EVORAP and this option was promoted in the towns. However it is also very clear that most of the communities and their WSDB's prefer direct management and are distrustful towards the private sector. Besides the strategic changes on the management, also annual plans, budgets and tariffs need to be approved by the DA (WSDB Asiakwa 2000).

5.2.2 Institutionalized Monitoring and Support

In chapter 2, several conditions were given for institutionalized monitoring and sup port such as the presence of a regulatory framework, capacity within an institution and practicing the responsibilities of monitoring and support. In the following sub sections the conditions for institutionalized monitoring and support by the East Akim DA to the WSDB of Asiakwa are analyzed within the framework provided in section 2.3.

5.2.2.1 Regulatory Framework for Monitoring and Support

In the Facility Management Plan (FMP) and the bye law that establishes the WSDB of Asiakwa, responsibilities regarding to monitoring and support to the WSDB are formulated as well. The FMP divides the tasks for monitoring between the DA, DWST and the R -CWSA and their tasks are somewhat overlapping. DAs role is stated as 'ensuring sustainable management of the water supply systems through monitoring the financial management and auditing accounts of the WSDB, overseeing the compliance of the contractual arrangements, approving tariffs with the view of protecting consumer and the poorest sections in the community' (FMP 2000: 17). The FMP also requires that the DA regularly requests reports from the WSDB and audits the WSDB accounts twice a year. The DWST's role is described as 'to offer technical advice and make

[7] This comprises 19 standpipe attendants, 2 Technical operators, 1 accounts officer, 1 revenue collector, 1Security Officer and 1Sanitation Officer.

recommendations to the Assembly' (FMP 2000:17). Additionally, the WSDB is supposed to request the R-CWSA every year to provide two experts to carry out monitoring and evaluation of the water facilities, WSDB's finances, administration and their relations with the community. A shortcoming of the FMP is that although the responsibilities for monitoring are clearly defined in the FMP, this is not the case for supporting the WSDB. The bye law only states that every four years the WSDB needs to be re-elected in a community meeting that is specially arranged for this purpose without making explicit which actors will facilitate and support the re-establishment and retraining of the new WSDB members. Another, rather major shortcoming of the FMP is that although the document is signed by the DA and the WSDB, it still does not give the WSDB a legal status because the DA has never passed the FMP to the MLGRD for formal approval. This means that none of the stakeholders involved in the water supply can be held accountable for the way they carry out their responsibilities.

5.2.2.2 Capacities for Monitoring and Support

The Institutions that can support and monitor water supply in communities seem to be well established in the case of district East Akim. To begin with, the R-CWSA has an office in the regional capital Koforidua from where it assists the DA's and DWST's in the region and carries out technical monitoring at community levels. There are reasons to assume that DA-East Akim has a relatively well situation regarding their capacities to deal with water issues. At the DA level there is a management team and a District Planning Officer who are, among other things, responsible for the planning, procurement but also for the coordination, supervision and monitoring of all water issues. The DWST was already established before the EVORAP project and the team is relatively well positioned and supported by the DA. The DWST for instance had an operational budget for their recurrent costs and they possessed over the necessary equipment to visit communities, such as motorbikes and a jeep. Additionally, the DWST members did not have tasks other than related to DWST and had a full time DWST function which is quite exceptional. In most other districts in Ghana, DWST members are seconded staff which means that they are from different existing departments in the DA and their DWST functions are additional to other functions they already have (based on informal talks, common readings and TREND reports on capacity needs assessments among DA's). At the moment of visit, the DA was setting up a District Works Unit that would become responsible for all the infrastructural works and the DWST was to become a permanent entity under this unit. If put in to practice, also this would distinguish district East Akim from most other districts where DWST's positioning within DA's is usually unclear. However, a rather important shortcoming in the capacities is probably that DWST members in the region, including from East Akim lack the knowledge and skills on pipe systems as was suggested during the interview with an R-CWSA engineer. The notion that pipe systems are relatively new in Ghana is in support of this suggestion. The DWST members do regularly visit communities and have cordial relations with the WSDB's. Still, various persons stated their concerns about what will happen when the EVORAP staff will leave the region and they pointed out doubts on whether the monitoring will be taken up by the DWST and DA. This concern rises from the fact that DA has not been prepared to work with the tools and procedures introduced in to EVORAP towns. Although the DWST regularly visits communities and collects information, the organizational capacity within the DA to process this information and give follow up to it is probably lacking. It is therefore doubtful that the DA will take over project staff's responsibility of effective monitoring of the WSDB in Asiakwa.

But; although the DA's did not get much attention during the EVORAP project, there were concrete plans by the GTZ to train the DA's, trough the R-CWSA, to set up arrangements for

monitoring the WSDB's and to use the EVORAP tools and to provide DA's computers. Some of the DA's had already been provided computers in previous KwF projects. Furthermore, the monitoring tools from EVORAP are adopted as national tools by the CWSA because of their success. It was pointed out that the CWSA would promote the use of these tools among other donors. The introduction of one harmonized monitoring system among WSDB's and DA's and to train the WSDB's and DA's on their use will certainly be an important step to institutionalize monitoring at DA level. Still, it remains to be seen whether other donors will adopt this monitoring system in their own projects.

Besides the capacity for monitoring, it is often stressed that DA's have a severe lack of capacities in a more common sense. However, the District Chief Executive (DCE) of East Akim, who is the district's highest official, strongly disagreed with the perception that DA's have a severe lack of capacity. He pointed out that persons were appointed for all the required positions and functions in the DA and that, although they might need training on various issues (he added: 'everybody can learn, they even need training at central level!'), these appointed persons were capable to take up their responsibilities. It appeared that the us of the words or stressing of a 'capacity lack' was perceived as insulting. Regardless the existing capacity, the DA -East Akim was facing some problems in carrying out their mandate and to improve their capacities. Both the DCE and the Planning Officer complained for instance about the failed devolution in Ghana and the still existence of central government control at the DA level. Their statements indicated that officials from the central government level are not willing to lose their power and want to keep control at the district level. The Planning Officer specifically pointed out that the line ministry departments of the DA level are still in charge of their specific areas and that these departments are still controlled by their own parent ministries. He indicated that as being an officer responsible for overall planning and coordination in the district, the autonomous functioning of the ministry departments creates difficulties with the formulation and implementation of integrated and coherent district plans. The DCE and the Planning Officer would not go in to detail on this issue but from their tone one could tell that the perceived existence of central control is a cause of frustration and difficulties. However, the previous is related to the common functioning of the DA and is not to water issues because contrary to other ministries and their departments, the CWSA was stated to be the only government sector that acts according to the rules of decentralization. This was conform statements by other actors and the observations during the field visits which suggest that the CWSA, especially in this region, closely cooperates with DA's. And it must also be noticed that despite the constraints posed from the central level, the DCE made a statement which appears to be the typical attitude and atmosphere within the DA and this statement was: *'In my district, we can manage.....'*
To reflect this statement on water issues, it can be stated that the DCE's optimism is not misplaced. One of the most noticeable and promising aspects of DA East Akim is their established relations with the R-CWSA which is strong and committed to develop capacities among DA's. During the visit for instance, it was observed that the R-CWSA had a official meeting with approximately ten DA's in Eastern Region to hand over their vehicles to the DA's and DWST's because they had new vehicles. The R-CWSA also cooperates with and supports the DWST's in several ways such as trough trainings. This was not only confirmed by members from DA East Akim but was also indicated by interviews with DWST members from two other districts (Manya Krobo and Suhum). The impression from the talks with DWST members in this region was that these are active and visit communities regularly and control WSDB's accounts.

A second issue that explain the relatively well situation of DA East Akim is that various donors have been active in the region who also focused on capacity development at DA levels with the

most notable being the Danish bilateral organization DANIDA. Since recently DANIDA implements their projects directly trough DA's. At the same time, DANIDA does also work trough the CWSA and the R-CWSA's during projects and they have their (Danish) advisors based in R-CWSA and CWSA offices. In a previous DANIDA financed program between 2000 and 2003, DA's and the DWST's were trained by the R-CWSA to prepare district plans and were provided equipment such as furniture and computers. In this program also area mechanics [8]were trained by the R-CWSA who on its turn was supported by the DA with finding area mechanics. Therefore now, both the R-CWSA and DWST have a list of area mechanics to which they can refer when communities ask for support. Currently DANIDA is implementing th e District Based Water and Sanitation Component (DBWSC). This program builds further on the previous DANIDA efforts and aim is to increase DA's capacities in various areas such as planning, management, administration of water services, managing contracts, carrying out community mobilization and facilitation proper operation and maintenance of community managed water schemes (TREND 2005). Under this program the DWST's were trained and provided motorbikes and jeeps. However it must be noted that the capacity development in this program is related to systems with hand pumps and hence the DWST's ability to control pipe systems did not increase. For hand pumps for instance, DANIDA/GTZ in cooperation with the R-CWSA have set up a spare part distribution system wit h offices in four big cities in Ghana (Tema, Accra, Tamale and Kumasi) and a distributor in all the regional capitals. Additionally, other programs in which DWST's and DA's were trained are UNDP's Community Water and Sanitation Project (1992 - 1996), JICA's Water Supply Project (1995-2000), UNICEF/Danish Government Water and Sanitation Project, Village Infrastructure project (2000 -2003) and KwF Rural Water and Sanitation project (2001- ongoing). Relevant to notice about these programs is that training the DA' s and DWST is provided by the R-CWSA.

5.2.2.3 The Practice of Monitoring and Support

Since the systems are handed over to the board in October 2003, monitoring and support to Asiakwa has mostly been done by the EVORAP project staff that was based in K oforidua, the capital town of the Eastern Region. Contrary to the expectation that project staff would have left the communities after handing over the system, project staff was still present until July 2006. The two appointed persons had two rooms in the R-CWSA building from where they regularly visited the project towns and where they collected all the information about all the EVORAP towns. At the time of visit the WSDB was sending their monthly financial reports and minutes to the project staff who transfers the data in to a computer program and control. Project staff would intervene if this is considered to be necessary, for instance if there is something wrong with the financial records. As examples, two letters were found in which the project staff ha d send the WSDB letters with the first being a notice that some procedures of financial and technical record keeping had been carried out wrongly (October 2004) and the second letter pointing out that the revenue collector had been submitting incorrect rep orts at the end of every month (March 2005). The project staff found no faults in the submitted reports and records after these two letters which indicates that the WSDB probably undertook action to prevent problems. This is a practical example of how monitoring can be helpful with addressing little problems at community levels and to reduce the chance that these to become big problems. Besides from monitoring, the project staff also supported the WSDB through training, re-establishing the board and gave ad hoc

[8] Area mechanics are individual and private actors who have technical skills and knowledge on certain systems and who can be hired by different communities to carry out repairs and so on. These actors are usually trained and retrained and provided equipment on project base.

assistance in various matters as with the installation of a treatment plant as explained earlier. However, the presence of the project staff is temporary and is thus not a base for institutionalized monitoring and support.

As explained earlier, monitoring and support are supposed to be done by the DA, the DWST and the R-CWSA after the project staff leaves. Keeping in mind the need for monitoring and support after their leave, the project staff attempted to institutionalize meetings and exchange of information between the DA and the WSDB. The relations between the DA and WSDB were pointed out as cordial and especially the fact that the DA has paid 5% to the capital costs has contributed to the good relations. Although the WSDB and the DA met regularly, the WSDB was regularly sending reports to the DA and the DWST made regular visits to the town, it remains to be seen for how long these relations will exists after the project staff leave. It is furthermore doubtful that meetings and regular exchange of i nformation were effective because the DA and the DWST members have not been trained as intensively as WSDB members to use the EVORAP monitoring tools and there are simply no clear arrangements at the DA level on how to analyze and interpret the information from Asiakwa. Recently an impact evaluation of the EVORAP project was carried out by TREND in four towns including Asiakwa. This study pointed that in all the project towns the DA/DWST's have not been providing the expected backstopping and monitoring and that DA's did not do anything with the information received from the WSDB's. Another example is that water quality testing is supposed to be carried out by the DWST twice a year but that had not been carried out either. The TREND study also revealed that in January 2005 none of the districts participating in EVORAP had audited the accounts of the boards. The R - CWSA has sent a reminder letter to all districts to point out their obligation to audit the water boards and a year after this reminder, in 75% of t he project towns these audits were still not carried out in (EVORAP 2006). However, during talks with the DA East Akim members it was pointed out that they audit the WSDB quarterly. One area on which many agree that the DA's play a crucial role and have provided effective support to EVORAP project towns is in dealing with social conflicts. As pointed out above, the R-CWSA is very active in the region and is involved in planning and implementation of various projects and has a role in monitoring and supporti ng communities and the DWST's. Specific in Asiakwa, the RCWSA role after the project implementation has been minimal because, due to presence of EVORAP staff, the RCWSA preferred to focus on other towns to support. The R-CWSA was well informed about the project and received reports and records from the WSDB's. The fact that EVORAP staff was based in the same building as R-CWSA has probably contributed to this fact.

5.2.3 Sub Conclusion: Sustained Water Supply in Asiakwa

At the time of visiting Asiakwa, the water system was functioning well; no major breakdowns had occurred and the WSDB and their staff were able to deal with minor, technical issues. Also the organizational part of the system was functioning; the WSDB was meeting regularly and the members had a good overview of the financial and administrative aspects of the system. But the question remains whether the conditions required for systems to keep functioning, will be present after a period of time the project staff leaves. This question is rele vant especially when it is considered that the project staff has contributed to the positive situation at the time of visit. In sub section 2.2.2 the conditions for sustaining the water supply were given and these conditions were elaborated in previous section. Next, some conclusions are made on these conditions.

Although ground water is available all year round and facilities are said to deliver enough water for the community, there are reasons to doubt that all people have access to the services. There are 19

standpipes and each is designed to serve 300 people and the population in the year 2000 was approximately 8973 which probably have increased in the last few years. This indicates that the facilities are actually not able to serve the whole populatio n and a part of the population is still dependent on alternative sources of water. There are some aspects in the systems that might form a constraint for sustained functioning after the project staff leaves. One of the most striking issues is that the technology used in Asiakwa is expensive, requires high levels of skills to handle which are probably scarce in the region and some spare parts are not easily available. A difficulty that the WSDB's is likely to face is thus the finding of skilled persons or th e spare parts for the electro mechanical parts of the system and especially the iron removal plant which is newly introduced in the Ghanaian water sector. This brings up the question why particularly this technology is selected. The transparency and the intentions of procurement in EVORAP are actually questionable when it is considered that the project is a German project, the project staff has been involved in tendering and procurement and the contracts for technical designs, the drilling of the boreholes and community mobilization are awarded to German companies. It is also questionable why the certain submersible pump is selected for this town. The pump is from a Danish manufacturer and as mentioned ealier, GTZ and DANIDA are setting up spare parts distri bution centers in the region which gives the suggestion that they jointly want to sell their own products trough these centra. Although technical problems are likely to occur in Askiakwa, these will not necessarily lead to unsustained water supply provided that the right support is given to WSDB. There are two institutions that the WSDB can ask support to: the DWST and the R -CWSA. These entities can either assist the WSDB directly or can provide support through facilitating the contact between WSDB and other entities such as private companies or area mechanics with the necessary spare parts and skills. Therefore the technical viability of the systems depend on two things the first being the WSDB's ability to keep an overview of the system and their decisiven ess to react promptly on problems and the secondly that support is provided by the DWST or R -CWSA.

An important determinant for the financial viability of the systems is the presence and the reliability of financial means to cover costs and clarity about who is responsible to generate the financial means. The WSDB is the responsible entity to generate the financial means to cover the system's costs. In Asiakwa the WSDB is responsible for all costs and has therefore set a 'cost recovery' tariff which implies that costs for operation, maintenance, management, rehabilitation and expansion are covered trough this tariff. Board members stated to generate enough income to cover the costs within the system however no serious faults, and subsequently high costs, h ad yet occurred in the system. There is a rehabilitation fund and theoretically this should cover the costs in case of major breakdowns but there is no guarantee that future incomes will be enough to put money on this fund. There are indications that the t ariffs are perceived as being too high and the board is facing problems with collection of revenues especially from individuals and government institutions. Additionally, people are still making use of the river Supong which implies that water consumption is less than the estimates used in technical designs. Subsequently the WSDB might face problems with generating sufficient incomes to cover costs. Besides, there is the possibility that expenses could increase considering the expensive system and scarcity of spare parts and persons to deal with the system. Additionally, electricity costs of the system are high and there is a chance that price of electricity will increase. A way to reduce costs in the system is to have regular preventive maintenance and the WSDB staff is supposed to carry out this tasks. At the time of visit, the WSDB seemed to have a good overview of the system and guided the technical staff in their responsibilities. Whether this will happen in the future depends on the WSDB's. Also the DWST is supposed to play a role by inspecting the physical systems periodically and to detect problems on time. Thus, preventive maintenance of the system is very much dependent on organizational capacities in the WSDB, the DWST's knowledge and skills to dete ct problems and

DWST's activeness and ability to give follow up to the findings from the field. The DA and the WSDB are jointly responsible for expansion of the systems and for replacement with the money from WSDB's replacement account. But this will depen d on the financial management and WSDB's ability to ensure enough incomes are generated and financial management is sound.

The organizational determinants are cross cutting have an influence on the technical and financial aspects of the systems. Much is dependent on the WSDB's skills and ability to keep control of the systems and take action whenever necessary. In the EVORAP case the WSDB members have been trained and supported intensively to carry out their responsibilities and this probably partly explains WSDB's well functioning. This is one of the strengths of the project and at the same time a major weakness because there are no clear arrangements for who will re -establish and prepare future WSDB's for their responsibilities and finance the costs. Alth ough the use of the monitoring tools is relatively easy, without basic training, their use might deteriorate. The arrangements for support in reviewing the yearly budgets and tariffs also remain unclear. According to the national guidelines, the DA is responsible for these issues but the DA's huge responsibilities vis a vis their organizational and financial capacity gives the suggestion that DA will have other priorities than supporting a small town like Asiakwa.

In the FMP, responsibilities for monitoring are divided between the R-CWSA and the DA. In case problems will occur, DA and R-CWSA can be approached. DWST regularly visits Asiakwa to inspect the systems and WSDB is audited by the DA. But it is not likely that DA/DWST monitoring will maintain over a longer time because there are indications that this relations have been encouraged by the projects staff. In the main conclusions in Chapter 7 more detailed conclusions on this issue will be given.

CASE 2

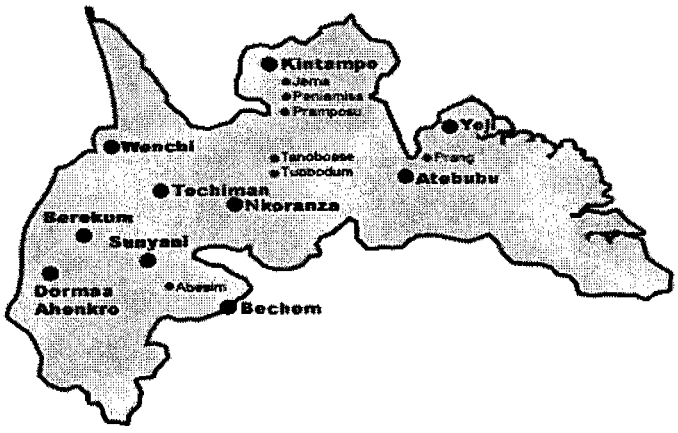
6. PROMOTION OF DISTRICT CAPITALS PROGRAMME (PRODICAP)

6.1 Introduction to PRODICAP and Small Town Nkoranza

This chapter describes the Promotion of District Capitals Programme (PRODICAP) which is implemented in the small town Nkoranza in the Brong Ahafo region. In the coming sections, first, the planning and implementation process of PRODCIAP is outlined, and then the conditions to sustain water are analyzed of the Nkoranza water system.

The goal of the PRODICAP programme was to stimulate the decentralization and development process in several district capitals in the Brong Ahafo region. The programme consisted of different components and improving water supply was one component under which a water project was implemented in three district capitals. One of these d istrict capitals was the small town Nkoranza in the same titled district Nkoranza and when mentioning the PRODICAP project, this only refers to the project implemented in this town. The district Nkoranza is one of the nineteen districts in the Brong Ahafo region in Ghana (see below Map 3). The district covers an area of approximately 2300 square kilometers and has a population of 127.384 and this population is highly heterogeneous (Website Ghanadistricts). Since the 1970's, district Nkoranza has seen a significant growth in the population which had doubled between 1970 and 1984. This growth is especially due to the migration of farmers from the dryer Northern parts of the country because of the favorable climate conditions and the richness of arable land in the region and the district (DA Nkoranza 2002). In the year 2000, 69.1% of the population was living in rural and 30.9% in urban areas and the population in rural areas was spread over approximately 136 communities (GSS 2000).

Map 3. Brong Ahafo Region



Source:
http://www.onetouch.com.gh/ot_coverage/coverage_ghana_details.asp?link=coverage&tlink=coverage&covId=4

Rivers and streams are the main source of drinking water (31.8%) in the various districts, thus also Nkoranza, in the Brong Ahafo region, followed by the borehole (25.3%), pipe borne water (23, 5%) and other sources such as ponds, dams and wells. The district Nkoranza i s drained by several streams and rivers which are used by people as a source of drinking water without prior treatment, even though these are often polluted (DA Nkoranza 2002).

The following sub sections outline the process in which PRODICAP project was p lanned and implemented and the main focus is the ownership that the DA of Nkoranza had in this process.

6.1.1 Participation in the Pre-Planning

The PRODICAP project started in 1998 with the signing of project agreements between the MLGRD and the KwF. This agreement probably outlined the requirements, principles, roles, responsibilities and the institutional arrangements for project implementation. The three main principles on which this project is based are community ownership and management, developmen t of a WSDB to operate in a businesslike manner and decentralized governance at the community and DA level (WSDB Nkoranza 2000:122). No information or indications are found to point out what the preferences of the MLRGD were regarding to project principles and project management and to what extent certain issues were conditioned by the donor. It is however for sure, as will be explained later, that the project is managed and implemented in an quite autonomous way without interference from the donor. After t he agreements were signed, the Project Implementation Unit (PIU) was formed within the MLGRD to be responsible for the management, coordination and monitoring of the project. No information is found on how the three district capitals [9] were selected and wh ether these had been pre-selected by the MLGRD and KwF or that the project was promoted among all the district capitals and to ensure that all capitals had equal chance to be eligible for funds and to participate in the project. In May 1999, a three day wo rkshop was held for the stakeholders from selected towns and where the key members from DA were also present. The goal of this workshop was to make sure that stakeholders get acquainted with the project principles, procedures and its various implications. Despite the fact CWSA was already established and the NCWSP was already formulated at the time PRODICAP was launched, the CWSA has not been involved in this project and the project did not make a direct link to the NCWSP. Nevertheless, there are similariti es between the project's characteristics and the national strategy. One example is that community ownership was adopted as a principle and hence it was decided to promote the active participation of 'beneficiaries' in the planning, implementation of the pr oject and to mobilize the community to take over management and control of the facilities after project implementation (PRODICAP 2000). A second similarity with the national strategy is that both community members and the DA were required to contribute eac h 5% to the capital costs.

The active involvement and mobilization of the local community was facilitated by a consultant contracted by the MLGRD/PIU. The consultant was TREND which is a Ghanaian training and research institution with rich experience in community mobilization and management, specifically in the area of water and sanitation. Prior to mobilizing the community, TREND first conducted a base line study to outline the existing community characteristics in Nkoranza and the institutional framework of water management. Nkoranza is divided in to various zones with each having their own Water User Group (all people that consume water from the system) and a Water and Sanitation Committee who are responsible for the water and sanitation in their zones (TREND

[9] The PRODICAP water project was implemented in three districts and their capitals Nkoranza, Kintampo and Ejura

2004a). This structures of zones with water and sanitation committees is probably established by a previous water in this town. Other institutional entities within the district were the Town and - Urban council and these are sub structures under the D A.

Based on their study findings and on consultations with relevant stakeholders, TREND prepared a proposal on how the WSDB should be formed and in what kind of institutional framework the WSDB should manage the future water system in Nkoranza. More spec ifically, this proposal outlined the roles, responsibilities, structures and arrangements for future management and the procedures and requirements for membership of and cessation from the WSDB. This proposal was first discussed in a so called Joint Stakeh older Meeting in November 1999 with representation from the DA, the Town and Urban Council, Water and Sanitation Committees and representatives from the community. Participating stakeholders were not only informed about the proposal but they also defined their expectations regarding to WSDB membership and future management of the system. This Joint Stakeholder Meeting was followed by an Urban Council meeting whose members formulated a final resolution to form a WSDB, and they based this resolution on TREND's proposal and the outcomes of the Joint Stakeholder Meeting. In this resolution, the council nominated eleven candidates who represented various institutions and groups in the district. Additionally, four ex-officio members were proposed to have a permane nt seat in the WSDB and these would be the District Planning Officer, District Finance Officer, a DWST member and the head of the Operating Unit (OU) (which is to be explained later). However the ex-officio members were not supposed to have voting power in the WSDB. The resolution also pointed out that the sitting of the WSDB is for two years and that, based on their performance, the DA could decide to maintain or replace WSDB members. The Urban Council submitted this resolution to the DA, whose members dis cussed and unanimously approved the resolution on 12 November 1999 (Official correspondence DA). Also the Town Council discussed the resolution internally during a meeting on 19 November 1999 and accepted it. On February 2000, an official letter was sent by DCE and DCD to the PIU/ MLGRD to inform them about the WSDB that was established.

6.1.2 Participation in the Planning

As in the previous case, the planning in PRODICAP project can be divided in to the managerial and technical planning. The coming text will first give some characteristics of the planning process for the management and then of the planning process technical aspects.

Although the PRODICAP project planning, and later on also the implementation, have been officially coordinated and supervised centrally by the PIU, this unit had delegated responsibilities to different entities. As previously mentioned, TREND was contracted by the PIU for community mobilization and during the project, TREND regularly sent progress reports to the PIU as a matter of accountability. The TREND proposal that outlined the institutional framework the WSDB was also here called the Facilities Management Plan (FMP). Once the WSDB was established and FMP approved, the document was discussed among WSDB members in a workshop organized by TREND in March 2000. The workshop was meant to inform the WSDB on their roles and responsibilities and to assess the training needs among its members to fulfill the tasks as described in the FMP. Based on this assessment, board members rec eived trainings from TREND on topics like project development and implementation, managing the water supply system, tariff setting, and community participation and so on. It can be concluded that DA ownership of the content of the FMP (like the proposed ma nagement option, tariffs, and institutional arrangements) have been high in terms of participation in interactions and decisions.

This is concluded because TREND had formulated the FMP in consultation with the relevant stakeholders including the DA and the document has been intensively discussed and approved in various meetings where also other DA's sub structures like the Urban and Town Council had participated.

In the planning phase, WSDB's management structures were established as determined in the FMP. The management modality adopted in Nkoranza is more comparable to the indirect management option rather than the direct management option as was selected in the case of EVORAP. It was explained earlier that with indirect management, the WSDB delegates its responsibilities for the planning, management and control of the day to day operations to another entity instead of controlling and supervising directly. For this purpose, the Operation Unit (OU) was established to become responsible for the management an d control of the day to day operations of the system. After recruiting the head of the OU, technical staff was recruited together by the WSDB and the DA who designed the job descriptions, qualifications and contracted the staff. TREND was present to give a ssistance in the recruitment where necessary. In the Nkoranza case, the WSDB and the OU are thus a sub structure under the DA rather than being a separate entity as in Asiakwa. The OU was also provided office space by the DA and at the time of visit, the OU was still accommodated freely in the two rooms in the building where the DA was previously based. One of the first responsibilities of the WSDB (together with the Town Council) was to mobilize 5% of the construction costs among Nkoranzan citizens. Each r esident had to contribute 70.000 cedis which is a relatively a big amount of money. To give an indication, it is approximately 10-20% of an average salary based on budgets and the budgeted salaries of the GTS and the OU's technical staff but this percentag e was probably much higher to many others. It is therefore not surprising that the WSDB faced problems with collecting the required amount of money because many people refused to pay. This created friction between the WSDB and community members and some people were even sued by the WSDB who actually never appeared before the court. Finally the DA had to support the WSDB to collect the 5% of the capital costs. As a consequence of the difficulties, the construction of the system started before the required amount of money was collected and this is against the underlying idea of contribution to the capital costs, namely that people show an ability and willingness to pay for water before being eligible for a certain water system.

A second WSDB responsibility was the determination of tariffs in consultation with various stakeholders like the DA, the Town and Urban Councils. Earlier it was decided that tariffs will not be set on a cost recovery base but would cover at least the operation and maintenance costs plu s the costs of repairs and unexpected breakdowns (WSDB Nkoranza 2000). It is not clear how the process of setting tariff has taken place but the outcome was that one bucket would be sold for **100 cedis** per bucket of approximately sixteen liters. Regarding t o the technical planning, an engineering consultant called WATERTECH was responsible for the technical design of the water infrastructure and later on for the supervision of the construction. This consultant was contracted by the MLGRD. Before drawing the technical designs, the engineering company carried out hydrological assessments. It must however be noted that later on during construction, the initial plans were revised and this issue is touched upon in the next sub section. WATERTECH was accountable to the PIU and therefore regularly sent progress reports on the progress in the technical planning. The consultant was also responsible to find a private company that would construct the water systems. Therefore WATERTECH launched tender documents, evaluated the bids of private companies, wrote an evaluation report and discussed this report with the DA's Tender Board who reviewed the report and approved on the company called KUOTTAM. And final approval, before contracting this company, was given by KwF.

6.1.3 Participation in Implementation

Implementation phase of a water project refers here to the actual construction of the physical infrastructure. KUOTTAM started to construct the pipe system in July 2000 and the PIU delegated the responsibility for day the day supervision of the construction to WATERTECH. Once the head of OU was recruited in 2001, he became joint responsible for the day to day supervision of the construction works. On initiative of the PIU and under their lead, three so called site meetings were organized attended by members from the DA/DWST, TREND, WSDB, head of OU, WATERTECH, KUOTTAM and a community participant. The DA has accommodated these and other meetings in their 'conference room' which could be seen as a form of support. The goal of these meetings was to inform each other on all issues related to the progress in project implementation. After these three meetings, stakeholder mentioned above were informed through the progress reports that were written by the head of the OU. As mentioned earlier, the initial technical designs were revised during the construction and the occasion was that WSDB received complaints from the community about the lack of distribution lines and standpipes in the newly developing areas in the town. The WSDB made thi s complaint clear during the site meetings and subsequently wrote a formal request to the PIU and WATERTECH to extend the system to these newly developing areas. Before approving it, WATERTECH assessed the viability of the request and concluded that it was genuine. Both the initial technical plan and the requested extensions later on have officially been approved by the DA/DCE and the system was subsequently expanded. This example is given as an indication of the level of interaction between different entities and the possibility of the community to influence decisions and the process. Another issue that came up during construction is that pipelines in some parts of the town raised the objection of some farmers because their lands and crops were being destro yed. The DA mediated between the WSDB and the farmers and the decision was that WSDB would compensate for the destroyed crops. After the project was completed and the systems handed over to the DA and the WSDB- the operations started in December 2001. To c over the operation costs in the first months, the DA gave a loan to the WSDB. Since then, the Nkoranza citizens depend on this system for their water supply.

6.1.4 Sub Conclusion: Ownership and Project PRODICAP

Also in the case of the small town Nkoranza, the DA-Nkoranza has no ownership of the PRODICAP project because the DA did not influence nor had a leading role in the initial decisions and the project outline. The project agreements that include its principles, goals, institutional arrangements and so on were formulated and signed at central level between KwF and the MLGRD. Because little information was obtained on the pre -planning, it is not clear which aspects of the project are requirements of the KwF and whether these are also preferred by the MLGRD. DA ownership **in** the PRODICAP is relatively higher than was concluded in the case of EVORAP. In Nkoranza, the WSDB and the OU are like a sub structure within the DA and DA members have permanent seats in the WSDB. Although it was not the leading enti ty and did not have responsibilities in all aspects during planning and implementation, the DA was highly involved in the process in terms of attending meetings, being informed and consulted on the formulation of the FMP, the forming of the WSDB. The DA ha s also been supportive to the WSDB on various issues like recruiting staff and mobilizing 5% of the construction costs. Also during implementation the DA has participated in the meetings and was well informed about what was happening regarding to community mobilization, technical designs, construction, establishing and training the WSDB. The DA has also provided support in conflicts with farmers over land and destroyed crops and gave the WSDB an initial loan in order to start operations.

Table 4: Nkoranza DA Participation in PRODICAP

	Responsibilities	Interactions	Decisions
Pre Planning Community Mobilization			
PIU	Coordination and Supervision, Informed		To contract WATERTECH and TREND
TREND	Leading	Present throughout the process	
DA	Consulted, Support	Meetings with other stakeholders, Internal meetings, WSDB meetings	Approve on WSDB Members
Other Groups: Town, Urban Council, Water User Groups	Consulted, Support	Meetings with other stakeholders and internal meetings	Approve board members
Community	Indirectly Consulted (through the Water User Groups and Water and Sanitation Committees)		
Planning			
Facilities Management Plan			
PIU	Coordination and Supervision, Informed		
TREND	Leading		
DA	Consulted	Community meetings, All WSDB meetings,	Approve
WSDB	Consulted	Community meetings, all trainings, meetings with project staff	Approve
Town, Urban Council	Consulted		Approve FMP
Community		Community meetings	
Tendering and Procurement			
PIU	Coordination Supervision and Informed		
WATERTECH	Leading, Consulted		

DA	Support and Consulted	Tender Board Meetings with WATERTECH	Approve
KwF	Informed		Approve
Technical design			
PIU	Coordination and Supervision		
WATERTECH	Leading and Consultation		
DA/DWST			Approve technical design and extensions
Community	Indirectly consulted trough the WSDB		
WSDB/GTS	Informed		
Implementation (Construction)			
PIU	Supervision Coordinating	Site meetings, Receiving Progress Reports from TREND, WATERTECH, GTS	
KUOTTAM	Leading	Site meetings	
WATERTECH	Supervising	Site Meetings, Community Meetings	
DA	Informed	Site Meetings, WSDB meetings, Community Meetings,	
WSDB/GTS	Supervising	Site Meetings, Internal meetings, Community Meetings,	
Other Groups: Town, Urban Council, Water User Groups		Community Meetings	
Community		Represented in the Site meetings (one member)	

6.2 THE WATER SUPPLY SYSTEM IN NKORANZA

This section describes the functioning of the system after project implem entation and more specifically it will touch upon the situation regarding the conditions for sustained water system and the likeliness that the system sustains functioning over time. Also in this chapter, section 2.2 and 2.3 are used to analyse the system's conditions.

6.2.1 Conditions for Sustained Water Supply

6.2.1.1 Technical Conditions

The source of the constructed system in Nkoranza is a mix of ground water and surface water and according to the head of OU, the amount of water that the system deli vers, is sufficient and reliable all year round. There are two streams and two boreholes with submersible pumps which from which the water is collected however only the two boreholes were being used because the water from the streams was polluted. The grou nd water has a good quality and taste and the only treatment it requires is little chlorination. Besides, there are arrangements for water quality testing because each year, water samples are given to a certain department in KNUST (University in Kumasi) for testing the quality of the water (interview head of OU). The system is connected to the national grid to use electricity as a source of energy to pump the water through the system. First, the water is pumped in to two reservoirs (with a capacity of 350m3) and from there it is distributed trough a network of pipes to the 49 standpipes and 162 household connections spread throughout the town.

The OU, whose members are responsible for the technical operation, functions in quite an autonomous way; one could say almost like a small utility. The head of OU plans the operational and (preventive) maintenance and coordinates and supervises the technical staff in carrying out their day to day tasks. The infrastructure is regularly controlled for faults like leakag es and unauthorized use and also the head of OU is regularly inspecting the system with their own vehicle. The OU and its staff have the necessary equipment and bicycles and a vehicle which enables them to go and have regularly inspections to detect leakag es, illegal connections and carry out maintenance work and repairs. During the visit in Nkoranza, it was observed that the head of the OU was very active and regularly off for inspections. It was also observed that the technical staff and the head of OU ha ve daily contact. Just outside the office of OU, consisting of two rooms accommodating the head of the OU, the treasurer and their secretary, there was a big tree under which the technical staff were regularly coming on and off with their bicycles. This ma de regular contact, supervision and exchange of information easy. When there were problems at different parts of the system, the technical staff was quick in their reaction and this assertion is supported by observations, the mobility of the staff and talk s with vendors who sell the water at the standpoints.

Both the staff and head of OU have equipment like bicycles, a vehicle and for the daily operations and minor technical issues, technical staff has the requisite skills. However, extensive and complex works are contracted out to a specialized private actor when needed. The head of OU stated that it was not difficult to find spare parts and in the FMP it is stated these can be purchased in the capital Accra. It is however difficult to say something abo ut the quality of the maintenance work that is being done.

6.2.1.2 Financial Conditions

In the sub section 2.2.2.2 it had been pointed out that the financial conditions for a water system relate to the cost, income and organizational aspects in the system. Sho rtly summarized, these conditions for financial sustainability are that costs in the system are recovered, that there is clarity on who are responsible for financing the different categories of costs and that the sources of income are sufficient and reliable. Also some other issues were mentioned as important for financial viability such as the right setting of tariffs and taking measures to reduce systems costs, for instance trough adequate selection of the technology and preventive maintenance. And finall y, also organizational aspects relate to the financial management such as record keeping, auditing and monitoring. Now the question is whether these conditions are present in the Nkoranza water system.

The responsibilities to cover system costs are clear ly defined in the FMP. In this document it is decided that the WSDB, trough its Operation Unit (OU) is responsible to cover the cost of operation, maintenance and repairs and that this should be done trough a tariff system. The water is sold for fixed tariffs at the standpipes and trough household connections. The WSDB has two bank accounts. The first is the WSDB's account on which the revenues are put and money from this account can only be withdrawn with the sign of WSDB's chairman and the District Financ e Officer. The second is the OU's account on which the yearly budgeted amount for the OU is put and money from this account can be withdrawn by the head of OU and the WSDB's treasurer. However, tariffs do not cover future rehabilitation and in the FMP it i s stated that 'huge investments on the long run will be financed from budgets at the national level' (WSDB Nkoranza 2000). Although the responsibility is clear, there is no guarantee that the central government will pay future costs.

Despite that the tariffs are relatively low, the head of OU pointed out they are able to generate sufficient incomes for system costs and furthermore in the report of an audit carried out by the Ghana Audit Service in 2004 shown that in the first three years, the OU have seen an increase of 150% in their cost/expenditure surplus. This gives the suggestion that system costs are not too high and can be covered with the revenues. It is however not clear whether this can be contributed to the adequate selection of the technology b ecause no information was found on this issue. Another explanation might be the well coordination and organization of preventive maintenance by the OU which might be reducing (unnecessary) technical expenditures. Still, there are reasons to assume that WSDB and the OU could face problems in their incomes. One reason might be the private house connections and private companies who also sell water to their fellow citizens for the same tariff and sometimes even cheaper. Consequently, the water sells at some st andpoints have already dramatically decreased. If these private connections would sell the water in the areas where people have less easy access to the standpipes, their existence would be more justified but these private actors sell water in the densely p opulated areas where there are enough standpipes. A second cause for reduced income is that many people in Nkoranza still use water from streams and the two rivers just outside the town. More importantly, these surface waters are actually polluted and thus form a threat to people's health.

For the financial management and control it can be stated that the situation appears to be less positive then the technical conditions as described before. This is actually more related to organizational and social aspe ct than on technical aspects in the system. There are for instance water meters at various parts of the system such as the pumping site and the standpoints and the technical staff is keeping daily records of the water pumped and sold in the system. Sometim es

there are technical problems with the water meters but these are easily solved by the OU's technical staff. The problems in the initial years of operation were more related to the difficulties in collecting the money in the various zones. By then, syste m was organized as such that in each zone, the water and sanitation committee was responsible to hire a water vendor for the standpoints in their zone and to make sure that the collected money was handed over to the OU. However, after approximately a year some conflicts occurred between the committees and the OU/WSDB and the OU could not collect the monies from the water sold. As a reaction the organizational system as initially written in the FMP changed and the OU's hired the vendors and OU became responsible to collect the monies directly from the vendors. Although these changes solved the problem of money collection, problems occurred due to weak internal auditing of the system as was shown in an external audit that was initiated by DA -Nkoranza. In Box 2 several findings of this audit are given.

BOX 2: Financial mismanagement by the WSDB/OU of Nkoranza water supply system

Some findings in the External Audit Report of Nkroanza

* The meter readers at the same time collect revenue s generated at the standpipes and from household connections which enables embezzlement.
* A poor register of household consumptions by meter readers.
* Embezzlement by one of the hired meter readers. He had managed to do this by giving the customers the right receipts while 'deceiving' the OU's accounts officer through copies of receipts without 'carbon prints'. To give an indication: the amount embezzled was approximately two times higher than the monthly salary of the head of OU and five or six times higher than the salary of the technical staff.
* The Accounts Officer, who had already signed off during the audit had received a 'grant' from the WSDB. This had happened without approval from the head of OU which is also supposed to give approval for such expenditures. The grant amounts approximately a three times more than the monthly salary of the head of OU and nine to ten times higher than a monthly salary of the technical staff.
*WSDB members signed also other cheques, payment vouchers and did some p ayments without knowledge of the OU head that has overall responsibility for financial management.
* Some store items said to be bought could not be traced by the auditors.
* The receipts of quite a lot of expenditures were absent about which the auditors raised doubts on the amounts expenditures registered
* The farmers who had supposedly received compensation for their destroyed crops did not acknowledge that payments were made. Whereas the previous Account Officer insisted payments were made.
* There was no record book for the use of vehicle and the fuel.
* There were a significant amount of unpaid bills by water customers

Source: Ghana Audit Service, 2004

From this report it also appeared that financial monitoring within the system has been inadequate during the first four years and some embezzlement of funds had been detected by revenue collectors and some unaccounted expenditures and flaws in record keeping were identified. It is not clear what kind of actions were undertaken to improve the financial mana gement and control at WSDB level.

6.2.1.3 Organizational Determinants

The WSDB is the governing body of the water supply system and is officially established as a substructure under the DA. The WSDB represents the town population and its official responsibility is to propose policies, strategies and guidelines concerning the management of the systems that first have to be approved by the DA.

It has been explained earlier that the WSDB has chosen for indirect management and thus day to day management and control is delegated to the OU with a technical and administrative wing. The OU operates autonomously and makes the yearly budgets and plans, such as for organizational changes or technical expansion, which are then approved by the WSDB. WSDB meets m onthly with the head of the OU; however, the previously mentioned financial problems suggest a weak support and control relation between the WSDB and the OU. Although it must be noted that the situation might have improved after the external audit because short after the audit a new WSDB was appointed.
The head of the OU, who is a water engineer and the accounts officer, are responsible for the overall supervision of the technical staff but also for financial management. The head for instance makes yearly plans for routine maintenance and coordinates the technical staff to carry out responsibilities. In the FMP it is also stated that the OU is responsible to carry out water marketing activities to sell more water to big consumers such as industries and to e nsure good public relations and consumer relations.

The technical staff has regular contact with the head of the OU. Outside the OU office there is a big tree under which the staff meets regularly before or after going to the site to carry out work. The technical staff members with their blue overalls and on their bicycles are recognizable and the impression is that people can easily ask them for support. The head of OU regularly writes reports to send these to the WSDB and the DA. The OU and DA seem to b e working closely together and their offices are near to each other. It must however be noticed that, although reports are written, this information is not stored systematically. Most of the relevant documents found for this study were provided by the previous chairman of the WSDB. These documents comprised the original versions of all DA-WSDB correspondence, minutes of the site meetings, WSDB's meetings, technical reports from the OU and the report of the Ghana Audit Service until April 2004. All these documents were provided for this study by the retired ex chairman who was keeping these in the storage room of his old shop, right in the middle of a busy market place.

6.2.2 Institutionalized Monitoring and Support

Also in the case of Nkoranza chapter 2 and section 2.3 are used in order to analyze the situation regarding to monitoring and support. Therefore the following sub sections describe the regulatory framework, capacities and the practice of monitoring and support by DA -Nkoranza.

6.2.2.1 The Regulatory Framework for Monitoring and Support

The norms and rules for monitoring and support to the WSDB and OU in Nkoranza is provided with the FMP. The DA has the main responsibility for legal, financial, technical and managerial monitoring and support and the DA is also responsible for the re-establishment of the WSBD. The FMP is a comprehensive document and DA responsibilities are given in quite some detail.

However it is unclear what the formal arrangements on paper are for the DWST and the works subcommittee to enable their work.

Since the DA was involved in the formulation of the FMP and approved on the documents, it can be assumed that there was agreement on the DA responsibilities after project implementation. Despite this fact, the FMP still does not give the WSDB and the OU a legal status because the document has never been sent to the MLGRD for formal approval. This means that WSDB/OU members can not be hold accountable or sued for their actions nor can WSDB/OU members sue or hold others accountable for their actions. Another major weakness of the FMP is that it does also not make any reference to R-CWSA of the Brong Ahafo Region which is supposed to be an important stakeholder in the regional water issues.

6.2.2.2 Capacities for Monitoring and Support

Although the provision is that DA monitors and supports the WSDB, the question is whether the DA does have required capacities to carry out these responsibilities.

Three entities of the DA are identified which are supposed to have a role in water issues and to support and monitor community managed water supply. These are the District Planning Officer (DPO), the District Works Subcommittee and the DWST. The DPO is acting as the coordinator of all water projects which is only part of his responsibilities. The DPO, as mentioned previously, has a permanent seat in the WSDB.

The indications on the importance that the DA attaches to water issues are contradictive. The DA does for instance not have a water plan and in their District Plan for 2000 -2004, water is not mentioned in a rather long list of DA's priorities. On the other hand the DA is actively involved in various water projects. At the time of visit, district Nkoranza had just implemented the CWSP2 which is a World Bank project that had started in the year 2000. This project was the continuation of the preceding CWSP1 implemented between 1994 -1999 and with these two projects, water systems were constructed and community management was introduced in various communities and small towns. At the time of visit, the DPO had just applied for more funds at the CWSA which implies more projects are likely to be introduced in the district in the near future. A problem with these project is that coordination among these have been very poor. This is admitted in DA's District Plan but can also appears from the projects implemented by donors varying from the EU, KwF, GTZ, the World Bank, to the USAID, Action Aid and various other little NGO's. All these projects vary in their focus and goals, in the way they have been implemented, how the DA was involved in the process and especially in their focus of capacity development. Whereas some projects put high emphasis on developing the capacity at grass root community levels (f.i training water and sanitation committees), other projects stress the capacity development among DA members or some by pass the DA to train R-CWSA members. How this can lead to problems was illustrated in the Nkoranza case where the previously established and trained water and sanitation committees in various zones and the newly established WSDB and OU overlapped. Although in the initial FMP the existing structures were taken in to consideration, this resulted in a system which required too intensive management and monitoring and created frictions between the water and sanitation committees and the WSDB/OU. As was explained earlier, this led to problems for the OU to collect the revenues from the water and sanitation committees. Finally the OU decided to adopt a simpler modality where the water and sanitation committees do not play a role.

There are some possible explanation for the lack of a water plan and project coordination. The

first issue is that the DA has a serious financial problem which disables it to carry out their responsibilities. The money received from the central government is pointed out to be far from sufficient and the DA was not able to generate significant incomes trough tariffs and taxes due to organizational weaknesses. Another explanation is that the unit under which the DPO works (District Planning and Coordinating Unit) is severely understaffed and therefore the DPO and other persons working in this unit are not able to cope with their tasks (DA -Nkoranza 2002, interview DPO). Also the staff turnover within the DA is very high. One of DPO's explanations for the human resource problem at DA level might be reflected in his next statement:

> *It has got to do with remuneration. Even tough we do not have enough personnel, we believe that if the few personnel on the ground were given the same support as the consultants, they could do better... Support In terms of remuneration, allowance, logistics everything is provided adequately to the consultan ts but not at assembly level'(Interview DPO).*

Although the DPO's regret is understandable, it is a fact that technical expertise is very important to supervise the constructor of a water system. From minutes and reports it is noticed that consultant WATERTECH has played an important role in finding shortcomings in the constructors' performance and ensured that certain issues were dealt with. This probably has contributed to the quality of the infrastructure and such technical knowledge not present at DA level. This is not to justify that DA's should not have responsibilities in technical planning and supervision, it is merely to indicate that such dilemmas exists about wh ere and how to allocate resources during projects.

But in some cases the DA's development of capacities is simply held back without being related to dilemmas as mentioned above. One constraint to develop DA capacities is the existent control from the central government over the DA. In DA's Development Plan it is pointed out as a problem that there are still important linkages between DA departments and the members in the departments appointed by and accountable to the central level and a similar finding w as previously made in the case of East Akim. These linkages between the central and decentral level are probably a constraint to coordinating local plans and policies and to integrate and strengthen the organizational structure of the DA. Another example w here DA development is held back was given during the interview the DPO who mentioned a World Bank financed project that would be implemented through DA in order to develop a system and the necessary capacities to raise revenues and taxes at local levels. The project outline was already formulated and ready for implementation but then with the change of the government, the project was cancelled by the Ministry of Finance. The DPO stated that no explanation was given by the Ministry. What is striking about this issue is that this project was cancelled while in government documents, the problem of revenue collection is often pointed out as a major weakness at DA levels and that there is need to improve this situation.

The DWST is constituted within the DA bu t the position of the team is unclear. The members are seconded staff from other departments which implies that their DWST tasks are only one part of their function and they do not have a budget for their operations. At the time of visit, the DWST also did not have a motorcycle which actually means that they are not able to do their work since collecting information from the field is one of their most important tasks. In a capacity needs assessment study among DA and DWST members [10] it is reported that the e ducation levels of

[10] This assessment study is carried out among various districts in the Brong Ahafo region including Nkoranza. It is

DWST members low and that the members do not have the formal qualifications for their specialties and often lack the knowledge about technical issues (TREND 2004b:8). This report also indicates that the DWST and DA members have received little training in the past. And finally, it is very unclear how the information flows within the DA are and how for instance information from the field is interpreted and processed within the DA.

6.2.2.3 The Practice of Monitoring and Support

The head of OU regularly wrote reports and send these to the WSDB and the DA. The technical unit is not supported by DWST: the GTS has its own technical staff for regular operation and maintenance and when more complex repairs need to be carried out, the GTS itself finds a private operator to carry out such tasks. Sometimes the DA also supports. There are indications that DWST skills are limited on water issues and more developed on sanitation issues.

DWST does not provide support to the OU/technical staff at all because OU staff seems to be better qualified than the DWST. In the case of Nkoranza it is more the other way round: the WSDB supports the DWST in their work in the communities outside the town. DWST does not have a lot capacity and is not supported adequately by the DA. DWST does not have a operations budget and thus receives no transport allowance and they are seconded staff from other departments in the DA. Therefore the responsibilities they are supposed to carry out as DWST member, is only part of their job. Meetings between DWST and the DA do not routinely happen and they are desirous for improved communication and teamwork. The DWST has little access to information and there is no systemized information and knowledge management. During the visit, the DWST did not have a motorcycle which practically means that they can not carry out visits to the communities which is the core of their task. After four years of establishment of the WSDB, the DA hired Ghana Audit Service to audit the board, OU and GTS. The audit report shows that the WSDB has not been supervising the OU and GTS very effectively and there have been some embezzlements, financial un-clarities and problems. Impression is that OU needs supervision and support to carry out tasks. The presence of DA members in the board does enable the DA to have a good idea of what is happening. And the closeness of the DA office and the OU/GTS office is also a plus. There seems to be good informal relations. District Assembly can decide to maintain or replace the members based on recommendations by a constituted review team (which is to be established by the DA. In the past DA proved to take initiative to replace the previous one and establish a new board.

There is little communication between the RWST and the DA/DWST. The DA only quarterly sends a report to the R-CWSA. And a TREND study revealed that the RWST has challenges in terms of internal conflicts and communication with DA personnel (TREND 2004b). The person responsible for water and sanitation issues in the district (Planning and supervision) has a permanent seat in the WSDB. Technical monitoring and support is carried out well. External actors are found and especially Kuattom have been approached in most of the problems that occur.

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therefore assumed that the conclusions are also applicable in this specific case.

6.2.3 Sub Conclusion: Sustained Water Supply in Nkoranza

The previous sub sections have outlined the technical, financial, organizational and the institutional conditions for sustained water supply in the town Nkoranza with using sub section 2.2.2 as a framework. Overall, it can be concluded that despite problems, the system is still functioning and that the organizational system was able to deal with issues that have occurred. Considering the existing conditions, the question is how likely the Nkoranza system is to ensure su stained water supply over a long period of time?

From the information found it appears that the technical conditions are not likely to be a threat to sustainability of the system. The groundwater is reliable all year round and is in theory the 49 standpipes throughout the town are able to provide water to all citizens. However, some people are still using the two rivers just outside the city which suggest unequal access to water in economic terms because for some people the price of water might be too high . It appears that technical issues are dealt with effectively. The Operation Unit (OU) is institutionalized and operates in quite an independent and professional way. The head of OU plans coordinates and supervises the technical staff, the regular maintena nce and inspections which probably contribute to a longer functioning and a reduction in the system costs. It has been pointed out that no problems are faced with finding spare parts or finding skilled persons to deal with technical problems.

Whereas the technical aspects of the system are strong and well managed, the financial management and control is identified as the major weakness of the system and thus a threat to the systems sustainability. The WSDB and OU are clearly responsible for the operation, maintenance and repair costs. The FMP states that replacement is to be financed from ad hoc resources such as by the DA or central funds so there is no guarantee on this issue. Regarding the expenditures, it is not clear how expensive the physical system is and how expensive the spare parts are. But the positive cost/expenditure surplus of the first three years suggests that costs are not a problem yet. However, the system's incomes might decrease due to reduced water consumption because there are private actors who also sell water and people use the traditional sources. Additionally, as it was noticed in the case of Asiakwa, electricity costs are also high in the case of Nkoranza water system.

The WSDB is supposed to control and support the OU on their p erformance but their relations appears to be weak. According to the FMP, both monitoring and support to the WSDB and OU is to be provided by the DA. The monitoring and support from the DA side is established but is done in an ad hoc way. The OU does not ha ve relations with the R-CWSA and do not get technical support from the DWST. The financial management and monitoring as well within the OU, as by WSDB and DA have been inadequate leading to embezzlements. This had probably have deteriorated the trust betwe en the other community based organization and the OU. In the case of Nkoranza, especially financial monitoring of the OU seems to be a shortcoming and needs to be improved.

7. WATER SECTOR DEVELOPMENTS IN GHANA

This chapter gives an overview of the decentralization process and the recent water sector reforms in Ghana. Three issues are central in this chapter and these are the ownership of the Ghanaian government in decentralization and water sector reforms, the formal roles and responsibilities given to DA's in these reforms and the roles and responsibilities of DA's in practice. The goal of shedding a light on these issues is to answer sub question 1.2.

7.1 REFORMS

7.1.1 Decentralization Reforms

To gain real understanding of the decentral ization process in Ghana and to analyze the extent to which decentralization and its current institutions are 'owned', thus are a product of indigenous dynamics and developments, one should actually consider the colonial and pre colonial history in the region. Although the history is acknowledged to be important and found to be interesting, the issue could not be considered in this report due to time limits and because it is out of the scope of this study. Therefore only a few aspects and a very limited ima ge could be given of the decentralization process since 1957's.

Ghana was the first African country to gain independence from the colonial power, the United Kingdom, in 1957 under the liberation movement led by Kwame Nkrumah. Under his rule between 1957 and 1966, centralized and socio-economic developments took place in the framework of a socialist and a one party constitution. In the first years after the independence, decentralization was seen as a threat because of the fear it would cause regional and ethnic separatism in the country (Ayee and Tay 1998). Along with the centralized policies, a strong state bureaucracy evolved. Between 1957 and 1988, Ghana had seven different governments and three of these were military and four were democratically electe d governments. The changes in the nature of the governments and the subsequent changes in orientations towards capitalism, socialism and decentralization, led to a discontinuity in the development of DA's because each government erased what the previous ha d achieved. In 1981 the populist Provisional National Defence Council (PNDC) overthrew a democratically elected government in a coup d'etat with Lieutenant Rawlings. The PNDC regime had some ideological supporters like influential leftist intellectuals, an d the countries Libya and the (former) Soviet Union (Mohan 1996, Tsikata 2001). Lieutenant Rawlings' wished to have a fundamental break from neo-colonial relations and stated to have a 'moral approach' to economic policies in which checking corruption and subsidizing food prices were central to economic policies (Mohan 1996:80). During this regime, Ghana was facing economic decline and a severe dept crisis and therefore PNDC had approached various socialist countries such as Libya, Cuba and the (former) Soviet Union for reconstruction finance. However, the amounts released by these countries were not adequate to solve the problems and Ghana had to turn to Bretton Woods Institutions (Mohan 1996:81). In 1983, Structural Adjustment Agreements were signed betwee n the IMF/World Bank and the PNDC and the main focus of the agreements was the economic liberalization and political restructuring of the country. Decentralization reforms during 1988 thus have been introduced in the framework of these Structural Adjustment Agreements. The IMF/World Bank conditionality attached to the loans for these reforms were, amongst others, trade liberalization, good governance, pluralist democracy and minimizing government intervention, and increased market intervention in the public sector (Mohan 1996). The agreement between the PNDC and the IMF/World Bank and the subsequent reforms, initially received popular support (CCODP 2005:13). However, it is clear that the

intentions of the PNDC in state restructuring were neither to decrease central power nor to increase local democracy but to increase administrative efficiency as stated in their policy guidelines. In these guidelines the goal of decentralization is stated as 'the devolution of central administrative authority to the local level in order to ensure popular grassroots participation in the administration of various areas (Mohan 1996:80-81). The undemocratic nature of the PNDC is also apparent from other issues. For instance, the PNDC itself had overthrown a democratically elected government and gained power in an undemocratic way. Within the PNDC there was a left and a right wing with the right wing being conservative and bourgeois that opposed to a popular government. Moreover, a short while after taking over power, the PNDC dissolved the existing and democratically elected district councils and appointed new committees and district secretaries instead (Mohan 1996, NALAD-CDD 2000:60). Later on when the PNDC introduced decentralization reforms under the so called Structural Adjustment Programs, it was provided that local government members were to be elected on a non partisan base and the pledge of the newly elected members included the phrase 'I will uphold and defend the revolutionary objectives of the PNDC' (Mohan 1996). The author comments 'which suggests that non partisan meant anything except the PNDC' (Mohan 1996:84). P

The PNDC changed in to the National Defence Council in 1992 and under donor pressure a democratic constitutional multi-party system was established. With the return to civilian rule in 1992; the DA system was re established. PNDC increased the numbers of districts from 65 to 110. District Assemblies became the political and administrative authorities in the districts and 86 functions were devolved to the DAs (Ayee and Tay 1998).

7.1.2 Water Sector Reforms

This section provides background information to the water sector reforms in Ghana.

According to various authors, the water sector reforms in 1994 and the subsequent institutional and legal frameworks have been highly influenced by the World Bank (van Edig et al. 2002, MFFG 2002). Prior to1994, the Ghanaian water sector was highly centralized and the state owned the Ghana Water and Sewerage Corporation (GWSC) was charged with the delivery of water and sewerage services to all Ghanaians. In the framework of the structural adjustments and under World Bank pressure, the state subsidy on water was removed in 1986. Few years later in 1989, the World Bank's Water Sector Rehabilitation Project was introduced which led to a reduction of numbers of the GWSC staff, to tariff increases in urban areas and to the introduction of tariffs in rural areas (CCODP 2005:17). During first half of the 1990's, GWSC's technical and organizational performance had deteriorated enormously. Most of GWSC's water systems had broken down and the rate of unaccounted water was 50%, which refers to the percentage of the total amount of water that is initially produced in the system but which gets lost during the distribution for instance due to leakages or due to illegal tapping of the water. This meant a great loss of income for the GWSC and additionally the weak organization to collect revenues, especially in rural areas, finally resulted in an indebted GWSC that could not meet the direct operating costs of their systems (WaterAid 2003, Karikari 1996). In order to identify the weaknesses of the GWSC, the World Bank and the MoWH initiated a study which was co-financed by various donors. The conclusions from this study, on which there seems to be a general agreement, were that the core problem of the GWSC was its centralized management and the low tariffs for which it sold the water. Neither the previously mentioned study nor other authors, touch upon the possibility that decreased central government involvement and decreased government financing in the sector as a consequence of World Bank conditionality, might also have been part of the problem. The

recommendations of the donor-MoWH study were the unbundling of urban and rural water sector and increasing private sector involvement and decreasing central government's role. These recommendations are not surprising since these are in one line with World Bank preference for increasing the role of private sector in public services.

In 1994 the Ghanaian Government received 120 million USD for a water sector reforms. Actually, the previous recommendations became requirements since the separation of the rural and urban water sector, privatization of the urban water sector and decentralization of the r ural sector were attached as conditionality to the release of this loan. Also in its Country Assistance Strategy the World Bank indicated that the Ghanaian Government will receive a total loan between 285 -640 million USD but the amount received would depen d on compliance of the government to the conditions such as increased private sector participation in infrastructure construction including in the water sector (ISODEC 2001:3 -6).
Subsequently, rural and urban water was unbundled by separating the respons ibilities in to the Ghana Water and Sewerage Division (GWSD) for urban and to the CWSA for rural areas. Second aspect of the reforms was the transferring the responsibility to operate and manage 110 rural and small town systems from the GWSD to DA's. And t he third aspect of the reform was the privatization of the urban sector which is still a controversial issue in Ghana. Short after the plans to privatize were made public, a broad coalition of civil society organizations was formed and led by the Integrated Social Development Centre (ISODEC)[11]. In spite of this opposition from the civil society, a total of 86 water supply systems countrywide were packaged into two units to be operated by two private operators under a leasing arrangement [12]. From national policies and central government attitudes it appears that central government actors agree on privatization. However it is not clear whether it is also the real preference at the central level or that agreement is based on the inability to opt for alternatives.

The CWSA is established with the explicit mandate of being a 'facilitator' in the sector. Therefore, as has become clear previously, the CWSA is not supposed to implement water projects but is has to work trough other entities such as WSDB's, DA's, donor s, NGO's, and the private sector. The NCWPS has adopted community management as a strategy and therefore the projects under this program are supposed to be implemented according to the principles of community participation and especially inclusion of women, demand responsiveness, community contribution to the capital costs of water systems and increased private sector involvement. In the sector policies and programs 'cost recovery' is pointed out as necessary to replace government subsidies for water services when the government has debts (ISODEC 2001:3). Although it is obliged for the urban water sector, the national policies do not require cost recovery tariffs in the rural water sector.

Apart from the question where structures and strategies originate f rom, information suggests that the MoWH/Water Directorate's and the CWSA's main concern was and is, regardless the content of the policies, to bring more coherence and consistency in the sector through harmonized (donor) approaches and practices. Until the NCWSP was launched in 1994, donors signed project

[11] Information on ISODEC and this coalition can be found at http://www.isodec.org.gh/campaings/water/index.htm
[12] Due to the high opposition, there have been many debates in the sector and privatization. Although it is still a controversial issue, impression is that through debates, negotiations and some studies in the sector- often commissioned by donors- there is now more agreement on privatization among the Ghanaian civil society and the acceptance is higher. The urban water has not been the focus and hence the issue is not elaborated on. But the privatization in the urban water could be pointed out as an example of 'hierarchical learning' as referred by Morrissey and Verschoor (2003) because trough discussions and joint studies in the sector, preference and agreement on an external policy is trying to be created.

agreements with different ministries[13]. And as indicated by the following statement, these projects created and still create inconsistencies in the sector:

> *'Projects bring certain dimensions that are related to their home countries. Each of them pushes to certain clausules to put in to the project agreement and there tends to be inconsistency. Each donor is trying to, apply their own principles, own procurement procedures and other issues, which creates problems for us. That's why we have been fighting this national program (CWSA official)*

Even though now there is a national policy and a program with guidelines and manuals and there is a national strategic investment plan (SIP), during interviews it has been pointed out that the SIP is not yet considered by donors and the NCWSP is still not handled as one national program but that donors still apply their own implementation and design procedures. This have been observed in the previously presented two cases and another example is that the World Bank and DANIDA are implementing their projects directly through DA's whereas other dono rs prefer to implement projects trough the CWSA. The CWSA does not have a choice but to adapt to these differences because the agency's financial dependence on donors is huge. To give an indication, between 1993 and 1997, 89, 6% of all NCWSP project costs were financed by donors, 6,9% by the Ghanaian Government and 3,5% by participating communities and DA's. Between 2000 -2003 donors contribution increased to 93,7% (of which 52,2% by DANIDA, 29,2% by KwF, 3,8% by IDA/World Bank, 5,5% by EU and 3% by other donors) whereas the government support decreased to 5,9% and participating communities contributed to 0.4% of the costs (CWSA 2004:28).

The high level of donor dependency, different donor practices and the following inconsistency in the sector, creates high transaction costs for the CWSA and causes a loss of sector information due to differences in the procedures for documentation, monitoring and information exchange. A government officer pointed out that 'project reports are difficult to lay hands on' (interview Water Resources Commission). Another consequence of the inconsistency was suggested to be the waste of capacities at CWSA level as reflected by the statement:

> *'... .especially when you have donor missions coming in at the same time, you can see your work consists of receiving and attending missions. Sitting down to really come up with visions and programs for the sector is hampered or held back (Interview CWSA officer)'*

To overcome the differences in donor approaches, the MoWH and the CWSA are pro moting the so called 'Sector Wide Approach' (SWAP). This would imply all donor monies are given to the MoWH/the Water Directorate in order to finance water (and sanitation) projects which will be implemented according to the same national principles, guide lines and procedures and which will be monitored in an harmonized way. A move towards SWAP is probably not preferred by all stakeholders in the sector and some donors prefer to keep supporting projects (interview DANIDA) but this issue is currently on the national agenda and it was for example discussed in a

[13] F.i the World Bank, the European Union, the African Development Bank usually signed their agreements with the Ministry of Finance, JICA (Japanese Bilateral Organization) with the Ministry of Foreign Affairs and CIDA (Canadese Bilateral Organization) with the Ministry of Works and Housing (MoWH).

donor conference in 2005. One concrete outcome of this conference was the forming of a committee to examine the possibilities and requirements to move towards SWAP. From several statements, directly or indirectly relating to SWAP, it became clear that donors tone to government institutions 'it is your sector, you must do whatever you want to do with it' but at the same time donors require that improvements in the water policy, programs, guidelines and pr ocedures are made before they will move to budget support because, as stated by a respondent, 'they want to know where they put their money in'. Probably in order to realize SWAP, the government institutions are working hard to improve their policies and i nstitutional set up. For instance, the newly established Water Directorate is active in coordinating all sector issues and has recently drafted National Water Policy (NWP). This draft document provides guidelines for inter - ministerial sector coordination and harmonization and it also sets sector objectives such as good governance, a stable macro economic environment, democratization of civil society and the rule of law. The draft NWP is currently being reviewed and important stakeholders are consulted on th e policy. Once finished, it has to pass the national parliament to become effective. The Water Directorate and the CWSA have also formulated the previously mentioned Strategic Investment Plan (SIP) that gives an outline of the needs in the sector in terms of infrastructure, finance and priority areas between 2005 and 2015. There are indications that donors, besides supporting to improve the coherence and the consistency of policies, also try to have a say on the content: different studies are carried out in, for instance in cooperation with CWSA, to make recommendation on the policies. And this can also be called hierarchical learning.

7.1.3 Sub Conclusion: Central Government Ownership and the Reforms

In sub section 3.2.2 the next characteristics were giv en as part of central government ownership of reforms : 1) a problem is identified and a related policy or a program is initiated by the government and its content is formulated with broad participation of country stakeholders; 2) key policy makers agree on the nature and the causes of the problem and the choices made in the policy or the program; 3) the government seeks support for the policy or program outside the central government and there are efforts for consensus building and finally; 4) there is no opposition or disagreement by the authorities. It has also been stated that there can be no ownership if a policy or a program is implemented trough conditionality or with coercion.

Considering these characteristics, the conclusion for decentralization i s that there was no central government ownership of the decentralization reforms. Although the initiative to introduce reforms was done jointly by the PNDC and the World Bank, the content did not originate from the Ghanaian government. The decentralization reforms did not occur from a broad participatory process but were formulated within the framework of the so called Structural Adjustment Agreements between the World Bank and the Ghanaian Government in which various conditionalities attached to the releas e of loans. Although the reforms did not give rise to opposition and were accepted, there are indications that the intentions to decentralize differed between the government actors and the World Bank. Whereas the World Bank saw decentralization mainly as a way to reduce government role and increased private sector involvement in the public sector, the PNDC saw decentralization as an opportunity to increase government efficiency and to have administrative decentralization without losing political power. Previous to this specific reform, there have been attempts to decentralize in Ghana but these never led to real devolving of central powers. So although there was no explicit opposition, from these differing intentions it is concluded that there was no total a greement on the content of the reforms.

With regard to the water sector reforms, the government ownership also appears to be none but conclusion on this issue is more complicated to make than with decentralization reforms. The water sector reforms were also part of the Structural Adjustment Programmes and the initiative was taken jointly by the MoWH and the World Bank. The content of the reforms was formulated with a combination of conditionality and hierarchical learning. With the water reforms, there have been more joint studies, public discussions and consultations among various country actors. MoWH and CWSA have integrated the required recommendations, conditions and principles from various studies into their policies. Although it is not clear to what extent country actors influenced the contents, there was no opposition on the provisions specific to the rural water sector and CWSA appears to agree on the contents and gives the suggestion of perceiving the programs and policies as their own. CWSA seems to be highly committed to implement and promote the alignment of donors to the national programs and policies. But still there are indications that the intentions of the national actors and the World Bank (who influenced the contents) appear to be different. For the World Bank who envisages to decrease government influence and to decentralize the sector, priority of the national actors has probably been to bring consistency and coherence in the sector. This still seems to be a priority for MoWH/WD and the CWSA as appears from the ongoing discussions on SWAP. However, their wish to move to SWAP and their active and committed attitude to take ownership in the sector might be hiding a CWSA preference which is contradictive to devolution promoted in their own policies and by some donors. This is because a move to SWAP implies re-centralization of plans and budgeting. Another indication for preferring deconcentration instead of devolution is the way CWSA operates through regional offices. But it must be noted that CWSA seems to recognize the importance of strengthening the DA's and seems to be committed to work through these entities.

7.2 DA's in the Water sector

In both decentralization and water sector reforms, the DA's attained significant responsibilities over their jurisdiction areas. In practice however, most DA's are not able to comply with their roles and responsibilities and the following sub sections analyze what the underlying reasons are for weaknesses among DA's, First, the formal mandate of DA is given, then some problems identified at DA levels are described.

7.2.1 Formal Responsibilities of DA's

As part of the decentralization reforms in 1993, the Local Government Act (Act 462) was enacted which forms the heart of decentralization. In this act, DA's are appointed as the focus for local development and as the statutory and legislative body for determination of policy objectives at district levels. DA's are responsible for planning, managing, coordination of all development plans in their areas of jurisdiction (Act 462, section 10, parts 2,3, 4) and their responsibility for planning have been reinforced further by the National Planning Act 480 (1994) that also gives DA's the legal mandate for prioritizing communities and planning, provided that DA's ensure community participation. Furthermore, Act 462 gives DA's the position of being the only entity with the mandate to pose taxes and to set revenues for services at local levels. In case a DA delegates it responsibility for a service to another public or private entity, the tariffs and taxes need approval from the DA first and the DA retains legal ownership of all the infrastructure. When a DA delegates responsibility, for instance to a CBO, it remains the responsible entity to support and carry out technical and administrative monitoring of the CBO (Act 462 1993: part4). Thus, the monitoring and supporting of a WSDB is legally embedded in this act.

The question remains what the DA's prescribed responsibilities are in water policies and programs. A review of CWSA's sector policies, guidelines and other formal documents shows that these are in one line with decentralization because these assign a leading role to DA's in planning and implementation of water projects. To put in to words of this study: in these water reforms DA ownership in projects is supposed to be high. But also after implementation, DA is expected to monitor and give support community managed areas. The CWSA requires that DA's appoint a desk officer for water and sanitation and establis hes a three membered DWST. Through these actors, the DA is expected to make district water plans, to implement projects and to support and monitor CBO's such as the WSDB's. The DWST's are expected to visit communities regularly to monitor the status and functionality of water and sanitation systems and to test the water quality. The DWST has to write technical and financial reports based on their findings in the field and the various support activities undertaken. Where necessary, the DWST assists WSDB memb ers, f.i by linking them up with private sector, by providing financial management support or by supporting with social conflicts (CWSA 2004a: 21). DA's are supposed to audit WSDB accounts quarterly and are also expected to review and approve WSDB's annual plans, budgets and tariffs (CWSA 2004b). CWSA, through R-CWSA's, are expected to support DA's in complying with their responsibilities regarding to water supply, for instance through facilitating, coordinating or providing logistical support. In concrete terms this implies that the R-CWSA assist the DA's with establishing a DWST, through training DA and DWST members and support with the formulation of a district water and sanitation plan. And finally DA's are, together with the WSDB, responsible for the rehabilitation of the water systems.

From what is described above can be concluded that DA's have the legal mandate to deal with water supply now the question is, how are they dealing with their responsibilities in practice?

7.2.2 DA Responsibilities in Practice

There seems to be a common agreement on the fact that devolution in Ghana has not fully taken place yet and that some ministries are reluctant to transfer power to the DA's (Mohan 1996, Ayee&Tay 1998, Mensah 1998, ISODEC 2001 and interviews wit h CWSA, TREND, DA East Akim and DA Nkoranza). Several institutional characteristics reveal the tendency from the central government to keep control at local levels and reduce DA's autonomy. One statement of a respondent confirmed the existence of this tend ency.

> ***Sometimes there is unnecessary political influence and pressure brought under the DA. When Politicians at national level have some interest then they distract their long hands and say can you do 1, 2, and 3 for me? And these can be not the priority of t he DA but of politicians. Some projects might be prestigious but are not addressing the needs of the community. (Interview WaterAid).***

DA's have a mix of appointed (30%) and elected (70%) members. The president former is appointed by the president in consultation with the traditional authorities in a district and the latter are elected on a non partisan basis with the ratio nale that non partisan local representatives will be more responsive to local needs, more independent from the central government and prevent political control interference with local levels. In spite of this measure, central control at local levels is existing which is highly undermining the DA's authority. For instance, DA's do not have autonomy over their human resource management and thus cannot hire and fire staff and are instructed on personnel levels by the Ministry of Finance (Ayee and Tay 1998). Th e staff in the line ministry departments is appointed by and accountable to their parent ministries, despite that Act

462 requires that staff over line ministries and departments is supposed to be controlled by DA members. As was seen in the two cases, inability to control line ministries seems to create frustration among DA members but also difficulties with coordinating the different activities at DA levels. Additional to the line ministry staff, there are also Members of the Parliament represented at the DA level but these are non-voting members. And finally, the District Chief Executive (DCE), who is the highest and probably the most influential person at DA level, is appointed by the President, though with prior approval of not less than two thirds majority of the members of the DA. It is not only the human resources over which the central level executes control but also over all the DA plans and budgets because these have to be approved by the RCC and the National Development Planning Commission first before becoming effective (Act 462, Part 2, Section 47). The combination of DA election on a non-partisan basis and high central control over DA affairs probably leads to accountability problems: DA's can not be hold accountable if they do not have the real power and this might deteriorate the credibility of DA's.

Besides the existence of central control, also financial constraints disable DA's to take ownership in their development. This is because the resources available to the DA are far from sufficient to carry out all their responsibilities and from this follows that DA dependence on the central government increases and their autonomy decreases. It is a constitutional provision (Act 455) that central government allocates 5% of their revenues to the DA's which is called the District Assembly Common Fund (DACF). The DACF is essential for the functioning of the DA's because it covers 60 % up to 75% of their yearly budgets and this further reinforces its dependence on the central government. DA's also depend on central governments for salaries of all established posts because the DA staff is not only appointed but also paid by the central government (NALAD-CDD 2000:18 and 106). Act 455 establishing DACF deprives DA's from autonomy over their budgeting because the Minister of Finance and MLGRD are authorized to determine the categories of expenditure that are met by DACF and this act also provides that no expenditures from the fund may be made without approval from the Ministry of Finance (Ayee and Tay 1998). Another source of finance for DA's is district taxes and revenues but these are very low. In Ayee and Tay (1998) and NALAD-CCD (2000:21)[14] this is explained as due to DA's hesitation to impose taxes on their electorate on which they depend on election time. However, there are also suggestions that DA's do want to improve their revenue collection but are not encouraged to do so or have problems with mobilizing local resources due to poverty levels. The financial resources available to DA's are by far not enough to fulfill all their tasks.

An example where the responsibility of DA is reduced is that DA's can only award contracts if these do not exceed 250.000.000 cedis (which is approximately 100.000$) (NALAD-CDD 2000: 68). This actually implies that DA's can only step in to contract management in small projects and not in the larger donor projects since the latter exceed such amounts [15].
Specific in the water sector, it is a contradiction that DA's have power to plan and at the same time CWSA facilitates the implementation of their national rural water program. In the two projects set out before it was already concluded that DA's do not have ownership of projects implemented in their jurisdiction areas and thus can not influence the framework in which these projects are to be introduced. The NCWSP and the national policies and guidelines already provide the framework

[14] Note: Ayee and Tay are also co-author in the NALAD-CDD report, thus the sources are not totally independent from each other.
[15] Even when at district level the project costs would not exceed the amount of 250 million cedis, information suggests that donors prefer to enter in to contracts for whole projects which usually cover numerous districts. In that case the tendering, procurement and contract management needs to be taken up to a higher level.

of principles, goals, procedures and arrangements to be applied and DA's have to comply with this framework.

> *Formulation of projects goes through an elaborative consultative process. Now to the extent to which district own process and outcomes of such consultation in the form of their own plan for implementation is limited in terms of how much information they have and their priorities are reflected... there are priorities at national levels that has been kind of pushed d own their throats (Water Aid Interview)*

There was a general agreement among respondents that CWSA tries to act according to the rules of devolution. CWSA policies and guidelines prescribe a high level of ownership in water projects. But in practice this is not always the case and the CWSA faces difficulties with working th rough DA's. As the CWSA official stated *'we seem to move faster than the decentralization process'*. First difficulty faced by the CWSA is the capacity problems among DA' s. It is worth nothing that in many sector documents, study reports and during intervi ews it is underlined, if not highly stressed, that DA's have a severe lack of capacities while the respondents from the DA's did not agree on these statements and were confident that there is a good basis of capacities. The way DA respondents formulate the problem is that it is more a lack of support and assistance from the government and donors to build on and make use of these capacities. Regardless from how the problem is typified, at DA level the structures and arrangements to plan and implement water projects are often not in place or the structures are very weak. Most DA's do not have a Water and Sanitation Desk officer under which the DWST is supposed to become an institutionalized entity. Although DWST is established in most districts, the members ar e mostly seconded staff from other departments in the DA with the consequence that institutional arrangements such as allocation of responsibilities, support, payment issues, budgeting, and accountability structures are unclear. Officially the DA has to es tablish an operational budget for DWST and provide them the necessary tools and equipment. However DA support to the operational costs of DWST's is pointed out to be minimal (CWSA 2004a:19) and DWST's often lack the tools for monitoring such as motorbikes, equipment for water quality testing, equipment for proper documentation such as computers or access to sector information. Having summed up the short comings at DA/DWST level, it does not come as a surprise that local monitoring practices are weak. In man y systems DA's for instance do not audit WSDB's, the water quality is not tested at community levels and operation and maintenance is poor at local levels (PPIAF 2001). Most WSDB's do not send their reports to DAs and in cases where they do, DA does not an alyze or follow up these reports (PPIAF 2001: 31, Interview TREND). One important shortcoming at DA level appears to be the lack of a systematized way of collecting data, record keeping and interpreting the information.

DWST members' skills and knowledge are often pointed out to be inadequate, for instance to control the private constructors, operators of water systems and the NGO's that work with local communities. Another problem regarding to human resources is the high level staff turn out among DA members. Once some members are trained or have achieved the highest posts, people often move to the private sector or international NGO's (Van Edig et al. 2003, CWSA 2004a:19). This issue was also noticed during the visit. Some DA officials, who had been invo lved in the project planning and implementation, had left the DA and some DA officers had moved from the districts to the national government. A part of the explanation for the lack of DA capacities might be the lack previously pointed out lack of autonomy and hence their inabilities to establish the required departments and the staff to deal with water issues. This problem was illustrated by an example the CWSA officer gave from the field when the DA was not able to hire a very skilled and

motivated DWST person without permission from the Ministry of Finance. Thus the lack of autonomy and central government control is likely not only a source of frustration among DA members but it also disables the CWSA to support DA's to set up structures and to build thei r capacities. As appeared from interviews with sector stakeholders from all levels, and as stated in sector documents, a leading role for DA's in projects is considered as desirable and necessary. Although the respondents did not use the word 'ownership', they pointed out that DA's involvement in the project cycle is a way to get knowledge about the systems and to prepare them to monitor the communities. Involving DA's was also pointed out as a way to increase the importance that DA members attach to water issues which in turn can increase the resources that are made available for water issues. However, it is unclear how much difference the importance attached to water at the DA level will make if the central level is still controlling local processes.

Second problem faced by CWSA to work trough DA's is that some donors seem prefer to work through CWSA rather than the DA. With the exception of World Bank and DANIDA projects, the RWST's have responsibility for the projects and fund administration (CWSA 2004a).

7.3 Sustained Water Supply in General

During the study, some issues are identified which seem to be common characteristics among many WSDB's which form a constraint at community levels to sustain water supply. These are given in this section.

It has been mentioned that a right selection of technologies is an important condition for sustained water supply. Although this study could not dig deep in to this issue, there are some indications that the selection of technologies is not always done in the right way. It seems to be acknowledged that, especially in small towns, the water technologies selected are expensive. Communities and DA's often have difficulties with meeting the 5% of the construction costs of the systems which is a requirement to be eligible for funds. Because the system is expensive, the recurrent costs of the systems are high, the tariffs need to be set higher and WSDB's are often able to raise just enough money for operation and maintenance. These issues were directly or indirectly i ndicated as undermining cost recovery of the systems and their sustainability (NWP 2004, CWSA 2004a: 36, interviews and informal talks). Other common finding for small towns and the selected pipe systems is that their spare parts are very scarce but also the existing local knowledge and skills to deal with these technologies. This seems to be less a the problem for hand pump systems that are usually constructed in more rural areas, but even if the spare parts are available for hand pumps, it remains questionable whether rural and remote communities have easy access to these spare parts. It is however not clear what the real cause of this problem is and the question remains unanswered whether the lack of spare parts and inadequate technical skills is caused b y wrong selection of technologies. This question has been considered during and after the field visits but no information could be found to answer it.

The principle of demand responsiveness is used as the justification to select certain technologies and to determine the service levels to provide at local levels. Official documents point out that there is a demand for higher service levels among communities. For instance in CWSA (2004a:36) the next lines can be found "the reduction in domestic contributio n[16] has resulted from the cost associated with the desire of many communities to acquire modern facilities. Pipe systems are perceived as superior and are thus more attractive to communities.' This perception appears to be

[16] This refers to the construction costs of the systems

based on reality considering that many respondents confirmed this assumption (Interviews with TREND, CWSA, WSDB Asesewa, WSDB technical staff informal talks with community members). However, for two reasons the principle of demand responsiveness can be criticized in the case of Ghana. The first critique is that the principle is not applied according to its own rules. In the analytical framework it was stated that an important condition for demand responsiveness is that people make informed choices. People that make a demand should have a go od overview of the different alternatives and the implications of these alternatives. At the same time it is widely acknowledged that information on the Ghanaian water sector is very scattered and there is a lack of information management and therefore it is questionable to what extent community 'demand' is based on informed choices. Thus the problem is probably not one of a lack of information because within the framework of different projects and among different institutions, lots of information and knowledge is generated. This information, however, is dispersed among different institutions and the exchange of information occurs in an ad hoc way. The respondent from the Water Resources Commission for instance pointed out that it is very difficult to lay t heir hands down on project documents and highlighted the need to manage the information flows in the sector. Also other respondents indicated that more attention for coordinating of the information flows in the water sector is a highly desirable and necess ary. Therefore it can be stated that there is no overview of technologies, the availability of spare parts, their cost implications and the ability of communities to deal with the different alternatives. Impression based on readings and conversations is that a pre-selected technology is discussed at community levels for which the communities indicate 'demand' and alternative technologies and their implications are not included in discussions. Furthermore, according to the Ghana Integrity initiative, over 70 per cent of corruption in the country is derived from procurement in the country[17]

And second condition to the principle of demand responsiveness is the ability and willingness to pay. One way to measure the ability and willingness to pay is that communit ies contribute to 5% of the capital costs (CWSA 2004a). The fact that many communities have difficulties with mobilizing these funds might be an indication that most of the systems are simply too expensive for communities and this fact seems to be totally ignored. Despite the 'demand responsiveness' of the technologies, evidence throughout the country show that communities consume less than estimated in technical designs which indicates a problem with measuring demand. In most communities and small towns, people consume less than 10 liters per capita a day while the CWSA estimate is 45 liters (PPIAF 2001:27). Another study in rural areas of the Volta region also shows that improved water facilities are often underutilized or abandoned (Engel et al. 2005) [18]. Engel et al (2005) found three factors that determine whether or not the new facilities are used: the availability of traditional sources such as rivers, streams and rainwater, perceived quality of the alternative source and the price of the improved source. Conclusion was that in case alternative sources are available and the quality of these sources is perceived well, people are more likely to keep fetching water from these sources. This study also found a significant negative between the price of the improved source and the quantities used from the source. This relation was found to be present regardless of the income levels. Also in all four small towns visited for this study - alternative sources were still being used by community members. Such local real ities need to be studied further and taken in to consideration when technologies and service levels are determined. A consequence of expensive technologies and less consumption at community levels is that **cost-recovery** is difficult to achieve. The MoWH and CWSA recognize the difficulties to achieve cost -

[17] http://www.ghana.co.uk/news/content.asp?articleID=14136 Last accessed 30 September 2006

[18] They assessed 20 communities across the Volta river basin in 2001 and in each community 25 households and community representatives were interviewed.

recovery in rural areas and small towns (PPIAF 2001:19). Especially the low income levels in rural areas are a constraint. Still the principle is promoted by donors and tariffs are set on a cost recovery basis.

Several reasons could be underlying to why communities do not make use of the new sources. The study of Engel et al 2005 does not touch upon the issue that at community levels water is still considered to be a social good which should be provided for free. This has been the paradigm for water delivery in rural areas for many years and it can not be expected that such perceptions change over night. Secondly, in between the lines, it has been stated a couple times that water is used as a political tool at DA levels implying that to gain electoral power, local politicians promise to provide water for free and condemn that it is sold for a price. This poses a problem for functioning of the WSDB's.

Social Inequalities

As pointed out above, most communities are not able to meet the 5% capital costs contributions. This requirement is part of the demand responsive approach; only those communities those show a 'willingness to pay' trough these contributions are eligible for project funds. This implies that inequality is inherent to demand responsiveness approach. Especially rural areas where people live from agriculture and where the economic activities are low, amounts cash flows are very little and subsequently the most deprived communities do not have acce ss to funds.
Neither the NCWSP nor CWSA policies provide any guidelines to deal with the poorest segments of the communities who are not able to pay. These people keep using traditional sources of water which are often polluted. This makes the most depriv ed in the society, most vulnerable for water borne diseases (NWP 2004, interviews and observations). In all the towns visited there were settler communities who had migrated from outside the region and these group of people are usually poorer, speak a different language and involving these communities in community issues difficult. During a conversation WSDB's operational staff [19] it became apparent that these settler communities are not integrated well and not totally accepted by the local community. These p eople were called the 'Fifi's' who are poor and come from the North of Ghana. The board staff complained that they face problems because of the Fifi's have their own hand dug wells and thus do not buy water from the systems. Therefore the revenues created by the board are not sufficient. In another community visited in the Brong Ahafo Region, small town Donko Nkwanta, there was also a significant settler group in the town and because these had moved later than the water system was constructed. The settler g roup was also pointed out to be poorer but WSDB members stated that the relations with this group and the community were positive. WSDB members, who appeared very sincere, stated their wish to expand the system to provide the settler group water but their inability to do so due to the huge costs which can impossibly be afforded by the community.

7.4 Sub Conclusion

DA is supposed to play an essential role n the water supply but in practice DA's do not have ownership of the developments in water issues. The lack of capacities is pointed out as the reason why CWSA faces problems with working through the DA. And central government is often blamed for failed devolution and the lack of capacities at local levels. One of the common findings in the community managed water systems is that technologies are too expensive and spare parts are difficult to find. This is a potential threat for the technical and financial viability of the pipe

[19] This was during the first field visit to Ghana and is thus not the WSDB of the cases described in this study.

systems. An overlapping issue which is a common problem is the water sector is that the coordination of information flows is inadequate. To be able to select what technologies are viable at local levels, information on different alternatives, their cost implications and the availability of spare parts, skills and knowledge in the sector must be available. And secondly, such information should be discussed with communities to have 'informed choices'.

Another general conclusion is that there are inequalities in having access to services. Due to the demand responsive approach, most deprived areas are not eligible for the funds needed to construct water supply systems. Also within communities there is unequal access to water in terms of being able to pay for water or in terms of distance and living on outside the central parts of towns.

8. CONCLUSIONS

In order to answer research the question 1.1, two water projects have been analyzed in the small towns Asiakwa and Nkoranza. For this purpose, first DA ownership in the context of these water projects is assessed and then the conditions for sustained functioning of a water system in these towns are outlined. Sub section 8.1 elaborates on the main findings derived from the two projects and then specifically on the relation between ownership and the con dition of institutionalized monitoring and support.

8.1 Research Question 1.1

How does local government ownership, in the context of two water projects in Ghana, relate to institutionalised local government monitoring and support to community managed water systems?

The previous findings from Asiakwa and Nkoranza underline the assumption that monitoring and support are important because both cases the future conditions for sustained water supply are partly dependent on the monitoring and support the WSDB 's will receive. In the case of Asiakwa, technical monitoring and support are found to be crucial and for Nkoranza it is especially the monitoring of the financial aspects that needs attention. In both cases it has been concluded that the DA's did not have ownership of the implemented water project, meaning that the DA's did not influence the broader outline of these projects' goals, principles, the allocation of responsibilities and the procedures to apply. In Ghana it is usual that this broader outline is formulated at the central level between central government institutions and donors and therefore no inferences can be made on the possible effects of DA ownership of the projects on DA monitoring and support to WSDB's. It was however concluded that there is a difference regarding to DA ownership in the two projects, meaning that DA participation in responsibilities, decisions and interactions varied and that DA -Nkoranza ownership in the PRODICAP project was higher than DA-East Akim ownership in EVORAP. This raises the question whether the higher DA ownership has been conducing to better conditions for DA monitoring and support to the WSDB of Nkoranza. Or more specifically; whether and how the differences in ownership have affected the existence of a regulat ory framework, the capacities and the practice of monitoring and support by the two DA's. These questions are discussed next.

Ownership and the regulatory framework: For both towns it was clear that the FMP provides the formal base for the relations between the DA and the WSDB. For Asiakwa, the responsibilities regarding to technical and administrative monitoring are divided between DA -East Akim and the R-CWSA although the responsibilities for supporting the WSDB are not made explicit. In the FMP of Nkoranza both monitoring and support are pointed out to be the responsibility of the DA and this document is far more comprehensive than FMP of Asiakwa and more specific with regard to the DA responsibilities and requirements for monitoring and support. The que stion is then whether this difference in the FMP's relates to DA ownership? Although in both cases the responsibility to formulate the FMP was the private consultant's, there are indications that the DA -Nkoranza and its sub structures have interacted more intensely on formulation and decisions of the FMP. This suggests that the higher DA ownership relates to more comprehensive DA responsibilities; however there are other issues that explain the comprehensive task description of the DA. The first issue is the nature of the PRODICAP project which is, as the title suggest, very much focused on the development at district level and strengthening the DA's. Fact that the DA was given a bigger role in the Nkoranza water supply system during and after implementation was probably

decided already from the outset, during the pre planning of the project for which it has been concluded that the DA did not have a role. The same can be said for the EVORAP project which is more focused on strengthening the capacity at the co mmunity and WSDB's levels and therefore the DA's role during and after the project probably had less attention already from the outset during the pre planning.

Although both DA's officially approved the FMP's and in Asiakwa even a special workshop was organized for DA-East Akim and the Asiakwa-WSDB on the formulation of bye laws, both DA's have never passed the FMP's and the bye laws to the MLGRD for formal approval. This means that the both WSDB's do not have legal status and therefore can not be held a ccountable for their actions or hold other actors accountable. This gives the suggestion that having decision making power such as approving a bye law or a FMP is no guarantee to ensure follow up action or to create understanding such as why these document s need to be approved at the central level.

From the previous it can not be concluded that DA ownership is related to more and better described DA roles and responsibilities for monitoring and support because this probably was determined at central level.

Ownership and Monitoring and Support in Practice: The relations between the DA and the WSDB/OU seem to be well established. Although there is DA -monitoring and support to the WSDB and OU, it is often on an ad hoc basis. DA is informed about the WSDB i n various ways such as trough the permanent seats of the district officials in the WSDB and the technical reports that are regularly sent by the head of OU. In the past the DA also has taken the initiative to hire an external Audit Agency to audit the WSDB profoundly and to re-establishing the WSDB after four years, although it is not clear whether and how new board members were prepared for their new responsibilities. Still, the fact that the DA takes initiatives for support indicates involvement. In pract ice the DWST does not carry out technical monitoring due to their limited knowledge on pipe systems but the OU and the technical staff seem to be able to handle problems and to find external actors for technical support. Though, regular external inspection s might be relevant and the R-CWSA has the mandate and probably also the requisite technical skills to do this. Therefore it would be recommendable to improve the linkages between the R-CWSA and the OU. Additionally, the DA provides assistance in case this is requested by the WSDB/OU. Although the relations and exchange of information between OU and DA exists, there is certainly much room for improvement. It is for instance not clear how the information received by the DA is processed and given follow up to but the findings on the financial mismanagement by the WSDB during the first three years of operations suggest that regular contact is no guarantee for effective monitoring. Overall it can be concluded that, although not systematized but ad hoc, Nkoranza -DA's monitoring and support to the WSDB is in practice and is likely to be in place after a longer period of time.

In PRODICAP, Nkoranza-DA ownership in the project had been relatively high and this might have contributed to establishing of relations bet ween the DA and the WSDB. From the beginning of the project, both stakeholders are involved in all parts of the process and although both stakeholders did not have a leading role, they were given responsibilities and the DA was assigned to support the WSDB in certain issues. However, besides the relatively high ownership, there are alternative explanations for the well established relations in between DA -WSDB in Nkoranza. First explanation might be the little distance between the DA and the WSDB offices whi ch is only a ten minutes drive. The fact that DA officers have a permanent seat in the WSDB also enables the assembly to keep an overview of the system but this is rather exceptional and an ad hoc

measure since the district counts numerous communities and some small towns and it is impossible that DA is represented in all WSDB's. Another explanation might be the relatively higher level of economic activity in Nkoranza compared to the surrounding communities which makes the town probably politically more important. Therefore, ensuring sustained water supply is in the town might have high priority. For the more surrounding and little communities, construction of facilities is probably perceived as more politically interesting than monitoring and support. This gives the suggestion that in order to institutionalize monitoring and support by a DA, its political relevance needs to increase. This would on the one hand require more empowered communities and on the other hand the presence of accountability structures. But these issues are out of the scope of this study.

The relations between DA-East Akims and WSDB of Asiakwa were positive at the time of visit: information was regularly exchanged through meetings and sending of reports and the DWST members periodically made visits to the town to inspect and collect information on the system. In the case of Nkoranza the WSDB/OU are actually sub structures under the DA which creates an institutionalized linkage between the two entities The DA is said to audit the WSDB's accounts quarterly and provides support to WSDB on social issues. But an evaluation on several EVORAP towns it was found that most other districts do not audit the WSDB's. However, also for DA -East Akim it can be stated that, despite information exchange, there is not effective monitoring from the side of the DA and there were no indications that the received information is documented, analyzed and given follow up to in an in a systematic way. The EVORAP project has been highly led and facilitated by project staff and to a lesser extent by the R-CWSA of Eastern Region. The ownership of East Akim-DA has been low in the project although the DA was informed well in the process and was involved in official moments such as applying for CWSA funds, establishing the WSDB, approving the plans and budgets and supporting in the collection of 5% construction costs. These might have contributed to establishing relations but other explanation, rather than East Akim-DA participation in interactions and decisions, is that the project staff has encouraged and facilitated the exchange of information, the holding of regular meetings between the two entities and has also encouraged that DA's audits the WSDB accounts. It is therefore questionable whether the existing interactions between the DA and the WSDB are institutionalized and will thus sustain over time, especially as the DA gets involved in more projects and towns. Still, it is most likely that ad hoc relations will be present over time as long as the WSDB's in the future remain active and request for support and the DWST members keep visit the town so now and then.

Apart from what is pointed out previously, there are indications that involvement of actors in the interactions and responsibilities during a project affects the perception of these actors about the allocation of responsibilities after the project. During the EVORAP project, the DA was involved in the resolving of conflicts in the community and probably as a consequence, both the WSDB of Asiakwa and the R-CWSA perceived DA role especially one as resolving conflicts. The same counts for the R-CWSA which provided technical support during the project and the DWST whose involvement in the project has been minimal. In interviews the WSDB of Asiakwa pointed out that R-CWSA is the institution to provide technical support in technical issues whereas the DWST, that also has the mandate for technical support, was not mentioned at all. In case of PRODICAP, the R-CWSA was not involved in the project at all and the head of O U did not mention R-CWSA as a stakeholder for technical support while the institution has a strong mandate for technical support at regional level.

Ownership and Capacities: The findings from the study indicate that DA ownership alone does not lead to more capacities for monitoring and support. Despite their relatively high ownership in the

PRODICAP project and since recently their ownership in World Bank water projects, the capacity of DA of Nkoranza to monitor and support communities is weak. Also the potential to develop capacities to monitor and support other communities seems to be lacking. For instance, the DA - Nkoranza does not have a water plan and in its district development plan water is not mentioned as an issue among a very long list of priority issues. Within the assembly, there is no department that deals with water but there is only a District Planning Officer, who is among other things, responsible for coordination of all projects and at the same time for water planning. DWST's institutional position within the DA is unclear and the members have other responsibilities additional to their DWST tasks. DWST receives little support from the DA such as an operational budget and equipment. The overall impression was that the DWST team in Nkoranza is more focused on sanitation rather than water issues. And finally the Nkoranza DA also seems to lack a systematized way to collect, document and analyze data but and there is no indication that in the near future any efforts will be made to improve this si tuation.

While on the other hand, DA-East Akim capacities and the potential to further develop these for effective monitoring and support seems to be relatively high, despite their little ownership in the EVORAP project. Water is a priority issue to the DA: the institution has water and sanitation plan which is quite exceptional for DA's and also in their common district plan, water is highly prioritized as a development issue. The district planning officer coordinates all water projects in the district and the DWST members solely carry out tasks related to DWST responsibilities which is in many other Ghanaian districts often not the case. DWST is supported well by the DA trough an operational budget and the team members have the equipment necessary to vis it communities. Moreover the DA is setting up a District Works Unit to be responsible for water and sanitation issues and under which the DWST is to become an institutionalized unit. A major weakness relating to monitoring is the lack of a systematized way to collect, document and analyze data and documentation in general is hardly done.

There is a rather clear relation, between the low level of ownership in East Akim and ineffective financial monitoring of Asiakwa. The project EVORAP has introduced tools that enable the WSDB to keep books and manage their finances. The DA members have not been consulted or informed well nor have been trained to use these tools. Hence, even if the WSDB send their reports to DA East Akim probably nothing will happen with th is information because there is no system in the DA to process the information. However, there are concrete plans by the R -CWSA to harmonize monitoring in the Region and to develop capacity among DA's to build in monitoring systems. It is very likely that GTZ will support R-CWSA on this issue.

A high level of ownership in combination with a relatively low level of capacities at DA -Nkoranza on the one hand and a low level of ownership but relatively more capacity and potential to develop capacities at East Akim-DA on the other, suggests that factors other than ownership are relevant for the presence or the lack of capacity. One of the constraints in capacity in DA Nkoranza was central control. Secondly, the DA Nkoranza has received very little support from donors and the R-CWSA to develop capacities and there was even a conflict situation between the DA and R - CWSA. One explanation why the relations between DA and the RCWSA are not established well might be the lack of cooperation of the two institutions in p rojects which is also not stimulated as in the case of Eastern Region. Other explanation could be the fact that the World Bank is the leading donor in this region which promotes decentralization and therefore works directly with the DA's which might cause friction between R-CWSA and DA, but this is merely a suggestion. The World Bank especially focuses on DA capacities for tendering and procurement of the private sector and contract management probably to prepare the DA for public -private partnerships which

is at the moment widely promoted. But there is no attention for strengthening the skills and systems for monitoring at the DA level. Considering the current capacity constraints at DA levels on the one hand and the persistent reluctance to transfer centra l powers to DA level and CWSA and R-CWSA's commitment and willingness to take lead in the sector on the other hand, it is questionable how well DA's will be supported in public-private partnerships. Applying this modality despite the un- favorable conditions might cause even more capacity problems. The situation in Eastern Region is more preferable where there is a strong and active R -CWSA. The R-CWSA is involved in most water interventions and that cooperates with and assists the DA's in developing capacities on issues such as technical, financial and administrative monitoring. It does so with support from the CWSA but is also encouraged to do so by GTZ and DANIDA. A second reason why East Akim DA has more potential to develop capacities is DANIDA's presence in the in this district. Since recently DANIDA has adopted an approach where the DA's have high ownership in water projects and DA's are assisted to develop capacities for water issues. It should however be stressed that, despite the existing potential, there is still much to be improved in DA East Akim.

TABLE 5. Schematic Summary of Answer 1.1

EVORAP	Regulatory Framework	DA Monitoring and Support in Practice	Capacities at DA level
Low DA Ownership * Minimal responsibilities * Not involved in all phases and all interactions * Decisions on FMP, tariffs	**Facilities Management Plan** * DA is the monitoring institution * Support role for DA is not mentioned * The document is short and not detailed on DA responsibilities	**Support and Monitoring is existent but not institutionalized** * The DWST visits Asiakwa regularly * Meetings between WSDB-DA held regularly * Reports are exchanged * Relations are cordial but probably not institutionalized	**Capacities regarding to water issues are positive** * There is a District Water Plan, water is a priority * DWST members are full time DWST position within the DA is clear * DA has no systematic way of processing information yet but there are concrete plans to harmonize monitoring system * Support from and good relations with R-CWSA
	Alternative explanation: * Agreements between CWSA-KwF/GTZ probably prescribed a little role for DA *	**Alternative explanations:** * Project staff stimulated and facilitated the relations * Water is already an important issue at DA level thus involvement is prior to the	**Alternative explanations:** * Existence of a strong R-CWSA in the region and good relations between DA-RCWSA * DANIDA presence in the district that encourages DA-

		ownership in Project	RCWSA cooperation and works trough both institutions.
PRODICAP	**Regulatory Framework**	**DA Monitoring and Support in Practice**	**Capacities at DA level**
DA Ownership Relatively High Ownership - Supportive role in various issues - Involved in most interactions and in different phases - Decisions on the FMP, tariffs	**Facilities Management Plan** * DA is the monitoring and support institution * The document is comprehensive and detailed on responsibilities	**Monitoring and Support is existent and institutionalized** * WSDB/OU are sub structures under the DA * DA has a permanent seat in the WSDB * Reports and minutes are exchanged * DA takes initiative to monitor and support on an ad hoc base * Monitoring and support is likely to remain over time	* There is no District Water Plan * Unclear position of DWST * DWST not supported well * No systematized way of processing information * No linkages with R-CWSA
	Alternative explanations: * Project Agreements between MLGRD and KwF already assigned the DA an important role * DA might have a political interest in Nkoranza and responsibility is already assumed prior to ownership	**Alternative explanations** * DA might have a political interest in Nkoranza * DA office is in the small town Nkoranza and near to the OU office	**Alternative explanations** *Overall lack of capacities in the DA (financial, human resources etc.) * Central Government Involvement at DA level * Construction facilities has a higher priority than sustaining facilities

8.2 Research Question 1.2

How does central government ownership relate to local government monitoring and support to community managed water systems?

To answer the research question 1.2, decentralization and water sector reforms in Ghana have been briefly touched upon. First, the background against which the reforms wer e introduced was given in order to assess central government ownership of these reforms. Second, the DA roles, responsibilities and current position in the sector were elaborated on. This sub section gives the conclusions on how the broader framework in Gh ana relates to issues as local government ownership and local government monitoring and support.

The Ghanaian institutional framework is defined well and responsibilities and arrangements for monitoring and support to communities are clear. Sector polici es and guidelines require that every DA establishes entities to deal with planning, coordination, monitoring and support to communities. Especially the DWST has a key role and also R-CWSA's have an important role in technical monitoring and in assisting th e DA, DWST and WSDB members. Therefore it can be concluded that the regulatory framework in Ghana provides a good base for institutionalized monitoring and support for community management. But more important is the question whether the capacities among th e relevant institutions are present and how monitoring and support is actually carried out. From the districts East Akim and Nkoranza but also from the common findings, it appears that DA's have limited financial and organizational capacities and lack sect or information. Given their limited capacities and huge responsibilities, DA's have to make priorities and it is not surprising that activities like monitoring and support, of which the results are not directly visible, are not a priority for DA's. Two mai n issues are identified that explain the limited DA capacities. The first issue is the reluctance at central government level to transfer powers to the DA's and to support them with build upon their existing capacities. The frustration following from the lack of autonomy might be part of the explanation for the high levels of turnover among DA officials. The second issue is the differences in the expectations from decentralization and the consequence that DA capacities are not developed in a strategic and s ystematic way. Many resources and efforts are spent on capacity development and especially at community levels f.i among WSDB's. Although WSDB capacities are, without any doubt, essential for community management, capacity solely at WSDB is not sustainable unless capacities DA or R-CWSA are developed as well. One of the most basic and crucial issues that should be addressed is a harmonized monitoring and information management system at the WSDB, DA and R-CWSA levels. At the moment of visit, monitoring arrangements were project based which creates a loss of information and is a constraint to establishing effective structures of information exchange and monitoring. Harmonization would not only improve monitoring and support but would also enable learning in the sector.

The question is then, how does the reluctance to transfer central powers and the difference attitudes towards DA's relate to central government ownership? A conclusion for decentralization was that Ghanaian government did not own the reforms d ue to their formulation with World Bank conditionality. This implies that actors responsible for implementation did not necessarily agree on the content of the reforms and furthermore it was clear from the outset that the intentions underlying to decentral ization varied among government actors and the World Bank. Consequently, the reforms have contradictive elements of devolution and tendencies to centralize. Also the current intentions to decentralize are different among actors. MoWH/CWSA seem to prefer a de-concentrated approach, DA's desire full devolution with political power whereas the

World Bank promotes devolution to promote local public private partnerships. The fact that devolution still has not fully taken place, even not after fifteen years might relate to the lack of central government ownership of decentralization reforms. If this expected relation is true, then central government ownership of reforms indirectly affects local government capacities and thus also institutionalized DA monitoring and support to community management.

Although it is doubtful to what extent national principles, guidelines and policies originate from the MoWH/CWSA, these entities consider these as their own and are committed to implement. CWSA is the leading agency in the sector but still their ownership is limited due to financial dependency on donors. CWSA considers DA as a relevant entity and tries to involve the DA in projects and facilitates capacity development among DA members. But the role of DA depends on donors and differs from project to project because CWSA is not yet in a position to enforce their national guidelines. Thus the inconsistency in the sector remains.

8.3 Research Question 2

Under what conditions does institutional monitoring and support contribute to sustained water delivery?

Sustained water supply was said to be in place when a system functions and delivers appropriate levels of benefits for its design period, there is equal access to these benefits, the system can be operated at local level with limited and feasible external support and the management is institutionalized. In chapter 2 the conditions were outlined for community managed systems to sustain water supply and categorized in to technical, financial, organizational and institutional conditions. The situation regarding these conditions specific in the two selected small towns have been described in chapters 5 and 6 and the common situation in Ghana was handled in chapter 7. Now, the common findings regarding these conditions are given.

There are some common aspects in Ghana that affect the sustained functioning at local levels, regardless the monitoring and support that is in place. One aspect is the socio-economic situation at local levels. Due to low economic activities in most rural areas and (to lesser extent) in small towns, incomes are low and irregular leading to an inability to pay for water and low consumption posing a threat to financial viability of systems. But the problem is not the socio economic situation alone but also that this situation is not adequately taken in to account in practice. The principles and approaches to community management are accepted and applied at national level but the way these principles are put in to practice cause problems and especially the demand responsive approach. People naturally desire higher service of levels and improved technologies leading to demand of technologies and service levels that are too expensive for local communities to afford. Although demand responsiveness is used as a justification. However there are two criteria according to which demand responsiveness should be applied to ensure sustainability. First criterion is that people are able and willing to pay. According to CWSA guidelines, being able to meet 5% of the construction costs is seen as an indication of what kind of system a community can afford. However there is evidence that many DAs and communities have difficulties with mobilizing the 5% of the construction costs. According to the principle itself, this should imply that less expensive systems are selected in those communities where this amount of money can not be mobilized but these technologies are often adopted anyway. A second criterion for demand responsiveness is that demand should be based on an informed choice. Technologies are usually selected on a project base with donor support and the demand is determined in one or two community meetings. It has not been a focus in this study to assess how representative and useful

these meetings are and how choice is determined. But the impression is that alternative technologies are not discussed and usually a pre selected technology is proposed to the communities. The common lack of information management in the sector on technologies, their costs, how various technologies function in communities etc. supports this impression. Also the fact that after construction it often turns out that people are not able or willing to pay and people keep using alternative sources indicates that something in the process of measu ring demand for technologies or service levels has been incorrect. The reason to emphasize this is that it forms a threat to the technical and financial sustainability of the systems.

A major concern to different stakeholders in the Ghanaian water sector is the lack of spare parts. But the question is never posed whether the problem is not one of selecting the technologies for which there are no spare parts in Ghana but also for which the technical know how is not locally present. Furthermore, if technologies are high standard, the system costs are likely to be high as well and when people consume less water than the system can deliver, costs will be relatively higher than incomes. Another critique, also often pointed out in literature, is that inequality is inherent to demand responsiveness. Most deprived and remote communities that are most in need of support are probably less organized and lack the money to be able to make their demand clear and to mobilize 5% construction costs. An overlapping issue is the setting of tariffs and especially when these are cost recovery as often promoted by donors. It is clear that all costs in a system need to be financed in some way or another. Principle of cost recovery implies that all costs are covered through tariffs and it needs to be stressed that the use of cost recovery tariffs should be introduced with care and trough considering the local realities. As for instance the study of Engel et al. 2005 proves, the level of tariffs and the availability of alternative so urces of water determine how much water people buy. Even if cost recovery tariffs are in theory conducive to sustainability, if this social fact is taken in to account, a cost recovery tariff may have the reverse effect since a higher tariff will lead to less selling of water and increased use of the many existing alternative sources. Thus the tariffs might be cost recovery but the incomes will not recover costs. Instead, under certain circumstances it might be better to set tariffs lower and find other way s to fill in that gap for instance government subsidies.

Overall conclusion from the previous is that acceptance of new approaches at central levels, even central government ownership, does not mean these principles are ready to apply at local levels and need to be adapted according to the social and economic facts. Therefore, donors and national institutions need to improve their knowledge on the conditions under which principles lead to sustainable effects and on how principles can be adapted according to local facts. For this purpose, the information management and knowledge flows in the sector need to become more systematic and this further reinforces the previously mentioned need to establish and harmonize monitoring systems at local levels.

8.4 Ownership as a Development Principle

It has been stated that a goal to this study is to provide a framework to analyze local government ownership and to make conclusions on how useful it is as a development concept. In chapter 3, a definition of ownership is given and it is explained how ownership is established in the framework of a project. Ownership means that an actor takes the initiative, influences the content of a development agenda and takes the lead in the implementation of that agenda. The concept of participation is used to measure influence and leading an agenda.

In the case of Ghana it can be concluded that local governments hardly have ownership of their water development because project outlines are usually determined at central levels between t he ministries and donors. Also at central levels it is doubtful to what extent country actors like the CWSA influence the content of project outlines and thus have ownership of these. Local governments are dependent on the central levels in terms of financ ial and technical resources and information and the CWSA is on its turns financially dependent on donors and hence does not have the power to ensure that donors act according to national policies. Moreover, these national policies, guidelines and strategie s reflect externally promoted principles. It appears that the CWSA closely cooperates with donors in project implementation but also in joint studies and workshops and trainings. The way the sector policies emerge, resembles the 'hierarchical learning' whe re the preferences of country actors are shaped trough advice, information and support. The CWSA wants to move to a sector wide approach to harmonize the sector and therefore has to take in to consideration what donors want to see in their policies because otherwise donors will not agree upon budget support. Once the policies are formulated, it will probably be said that these are 'owned' by the CWSA while these are highly influenced by other actors. It appears that the CWSA does consider the strategies and policies as their own and is highly devoted to their implementation. However the word ownership in this context would be nothing more than a surrogate for aid conditionality, though it is induced in a less rigid and less straightforward manner and external requirements are more difficult to pinpoint. The case of CWSA shows that hierarchical learning can lead to commitment but the question is whether it will create a healthy sector. For example, through the NCWSP, community management is widely implemented with CWSA-donor projects in many communities. But a committed CWSA alone does not ensure that the strategy will be successful. As was shown in the case study, actors like the DA and MLGRD are essential to make the strategy work and conditions at local gove rnment levels are essential to ensure support to communities.

The overall conclusion is that constituting ownership is difficult in a situation where the dependency relations are highly unequal. And when it is considered that inequality in resources is inherent to development assistance, it can be said that ownership is a principle that is problematic to apply in development and can be misleading. This is not only the case for 'ownership' among government institutions but also for the principle of community ownership. It is highly questionable whether one should speak of community influence in decisions if these decisions are based on limited (and possibly biased) information provided by external actors. Therefore, the question ownership can only be assesse d when there is transparency in the process, enough information and clarity on the allocation of powers. And besides, questioning who has ownership should go along with accountability structures to account for the outcomes of ownership.

8.5 Summary of the Findings

- This study underlines the assumption that support and monitoring to community managed areas is essential for sustained water supply
- Monitoring and support by local governments is probably politically less interesting than construction.
- Local government's interaction in project planning and implementation seems to be related to their establishing of relations with other sector stakeholders
- Local government ownership can create motivation whereas a lack is likely to create frustration and deterio ration of the capacities.

- Responsibilities of different actors during project planning and implementation appears to determine the perceived responsibilities after the project.
- Existence of ad hoc or institutionalized support to the DA itself appears to c reate better conditions for the DA's to institutionalize monitoring and support to communities.
- A constraint to institutionalize monitoring and support is the lack of a harmonized system of monitoring at local levels. The differences in monitoring systems at local levels are related to the CWSA's limited ability to take ownership in the sector and enforce harmonized approaches.
- The limited capacities and the lack of autonomy among DA's are major constraints to institutionalize monitoring and support. It is likely that the limited capacities and limited autonomy at DA level is related to the lack the central government ownership of decentralization reforms.
- Several principles in the sector that are asserted to lead to sustainability have a opposite effect under certain circumstances. Before applying principles, the local circumstances need to be considered.

8.6 Recommendations

Based on the conclusions above, several recommendations can be made on how to create better conditions for institutionalizing local government monitoring and support and sustained water supply. The findings indicate that involving a local government in a process is motivating and enables them to establish relations with other actors and communities and create awareness on roles and responsibilities. Therefore, it is recommended that local governments are involved in projects. This can also contribute to bottom up accountability of community based organizations such as the WSDB because community members know that complaints can be addresse d to the local government which in turn can take action. Due to time limitations, monitoring from the grass root levels has not been a focus of study but especially for community management this seems to be a relevant issue and worth considering in other r esearch. More grass root monitoring could for instance also lead to an increase in the political relevance a local government attaches to supporting communities.

Another recommendation is that, besides ownership, local governments should be supported in developing their own capacities and this should be done in a strategic way. Especially harmonization of monitoring structures at local levels seems to be a perquisite for effective and institutionalized monitoring and support. It should therefore be avoide d that relevant sector stakeholder in a region, apply varying monitoring procedures and use different tools and indicators. Specific in the case of Ghana, donors should avoid using different modalities for monitoring they promote and align to the monitorin g modality which is promoted by the CWSA.

A recommendation for sustainability of projects is that more research should be conducted on the principles applied like demand responsiveness and cost recovery to find out more about the conditions under which these lead to the asserted sustainability and to formulate guidelines for how the principles in practice can be adopted to local realities. Secondly, the importance of systematic information flows should be acknowledged and addressed for overall transparen cy and development in the sector.

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ANNEXES FIELD VISIT 1

ANNEX 1.

Respondents First Field Visit

Institution	Name	Position	Gender	Type of Institution
- TREND	O. Frimpong	Assistant Programme Officer / Community Development	Male	NGO, National Consultant
TREND	Bernard Akanbang	Programme Officer/ Institutional Development	Male	NGO, National Consultant
WRM	E. Asare		Male	Government Institution
KNUST	Mr. Kpordze	Head of Water Resources Division /Senior Lecturer	Male	Kwame Nkrumah University ,Kumasi
CWSA	B. Kubabaom	Director of Planning	Male	Government Institution
DANIDA	M. Mogens	Programme Coordinator	Male	Bilateral Donor Denmark
WaterAid	S. Ntow	Deputy Country Representative	Male	International NGO
WaterAid	J. Danquah	Programme Officer	Female	International NGO
GTZ/EVORAP	H. Fink	Programme Coordinator EVORAP	Female	Bilateral Donor Germany
Water Directorate	Yeboah		Male	Government Institution
	E.Nkrumah	Project Manager PMU	Male	Government Institution
CONIWAS	P. Apoya	Chairman	Male	Coalition of NGO's in water and sanitation sector
WSDB Nyahini		WSDB-Technical Staff in Small town	3x Male	Community Based Organization

ANNEX 2.

Questionnaire District Assembly (DA) and District Water and Sanitation Team (DWST)

1. How many small towns fall under the responsibility of the DA?
2. Do these small towns implement the Small Town Piped Water Programme?
3 How many standpoints are there in each small town? What is the amount of beneficiaries that are supposed to be served for each standpoint?
4. In what way was DWST involved in the formulation (planning) of the Small Town Piped Water Program? *Selection of communities/ Water demand calculations/ Design techniques / Tariff setting*
5. Does the DWST have CWSA guidelines and criteria for project implementation?
6. Did the DWST provide support to WSDB during the preparation of the project? For example - Needs assessment/community assessment / Identificati on of alternatives / financial support / Mobilizing community revenues / Human support / Provision of information or material, guidelines?
7. Was this support provided by other entities? CWSA/RWST/NGOs?
8. Which other actors were involved in the approving the Community proposals. How often were there meetings/exchange of information before approving?
9. Are more interactions between DA-CWSA-WSDB desirable in the planning phase of the program?
10. What was the role of DA/DWST in tendering: contracting priv ate sector? Did the DWST get assistance from the CWSA or support NGOs? What kind of support?
11. Did the DA/DWST have problems and difficulties in the process of tendering and contracting the private constructor?
12. What kind of support has the DA/DWST given to the WSDB during Implementation?
13. What kind of support has the DA/DWST given to the WSDB after Implementation?
14. How often does the WSDB make reports about operation and maintenance, their accounts and the water quality control? Do they send this to the DA?
15. How often does the DA/DWST control the accounts of the WSDB?
16. How often does DA/DWST carry out water quality controls?
17. What are the problems at DA that makes carrying out tasks difficult?
18 Doest the RWST/CWSA provide DA/DWS T Support?
20. What aspects in communication could be improved? Between DWST -CWSA/Between the DWST and Water Boards/WATSANS

ANNEX 3.

Questionnaire Water Sanitation Development Boards

1 How many people are in the WSDB?
2 How many women are in the WSDB?
3 What are the responsibilities of the WSDB?
4 How did the WATSAN participate in the preparation and planning phase of the Small Town project?
5 On what issues did WSDB have influence during project planning? Did WATSAN have influence in the choice for tariff, sites, and money collection systems?
6 Did WSDB influence other issues? Could you give an example?
7 How did community participate in the planning phase of the project?

8. What does the WSDB think about the CWSA criteria for systems to be cost -recovery are the requirement that community contributes of 5% to construction costs?
9. What are the problems phased during project implementation?
10. How were these problems overcome?
11. Did any problems occur after project implementation? What did t he WSDB do about this problem?
12. What other entities provided support?
13. What is the relationship between the DWST and the WSDB? What are the communication structures and information exchange structures?
14. What support does the WSDB get from the DW ST or CWSA?
15. Do DWST and CWSA have an overview of the problems of the WSDB?
16. Is more interaction and communication between WSDB and DWST desirable?

ANNEX 4.

Questionnaire for other actors (Used for CWSA and Donors)

1. What are the goals and resp onsibilities of this institution and what activities are undertaken to fulfill the responsibilities?
2. Could you give a short overview of your experience in the water and sanitation sector?
3. Could you explain how programs/projects are designed at gov ernment level?
-What actions are undertaken?
-what decisions are made?
-What is the role of donors? -
-How are the decisions made?
-Who are involved in the decision?
4. Does the DA participate in the design process of a project/program?
5. What is the role of DA's in the design process? *Informed/consulted/decision making/*
6. Do you think that more DA involvement in design process of a program is desirable?
7. How are the responsibilities allocated during project implementation? Who are responsible for contracting, construction, monitoring and capacity development efforts?
8. How is DA involved in the implementation?
9. What are the capacity problems among DA's? Are they supported by the CWSA?
10. What are the capacity problems at the CWSA level?
11. What are the interactions between DA's and CWSA? Meetings/exchange of reports/
Are there clear guidelines on how the interaction should be?
12. What are the common problems at WSDB level to mange their systems?
13. How are communities supported and contr olled after project implementation?

ANNEXES FIELD VISIT 2

ANNEX 5.
Respondents Second Field Visit

Institution	Name	Position	Gender	Notes
WSDB Asiakwa		All WSDB members		Interview with whole WSDB- issues discussed in a broad way.
R-CWSA Eastern Region	Theophilip Mensah	Technical Engineer/Head of Monitoring and Operation Unit	Male	
WSDB Asesewa		WSDB members	5 Male 3 Female	Interview with whole WSDB- issues discussed in a broad way.
DWST from District Suhum	Gabriel M. Nartey		Male	This DWST is not responsible for Asiakwa or Asesewa. The interview was not planned but happened ad hoc
District Planner Manya Krobo	???		Male	DA visited without prior notice (DA phone number was not available) Interview not conducted: the person had to leave for to Accra to attend a workshop
DWST Manya Krobo	M. Dunyo F. Bedzo M. Aryee R. Larbi	All DWST members EHA 3x	4	
DA East Akim		District Planning Officer	Male	
DWST East Akim			2 Male 1 Female	
DA Nkoranza		District Planning Officer		
DWST Nkoranza		District Health Officer	Male	
WSDB town Nkoranza	Stephen Eyamfi	The General Technical Supervisor (GTS)	Male	
WSDB town Nkoranza	Mr. Donkor	Ex-Chairman	Male	
WSDB staff	Mrs. Efia	Water Vendor	Female	
WSDB Donko Nkwanta		All WSDB members	All Male	This small town is not described in the report.

ANNEX 6.

Questionnaire District Assembly (DA) and District Water And Sanitation Team (DWST)

Common Questions: about the respondent and the District

1. Could you give a short introduction about your background and experience in the water and sanitation sector?

2. For how long have you been a member of the District Assembly?

3. (If appointed) By which Ministry are you appointed as a DA member? If elected: which communities are under your responsibility?

4. What are your responsibilities regarding to water and sanitation in the district? And particularly related to small towns?

5. How many people live in the district?

- How many people in the district have access to water and Sanitation services?
- Is there information available on the geographic situation of the district?

6. How many small towns and communities does the district count?

7. What water and sanitation programs are currently being implemented in the district?

- Which external agencies are involved?
- Do they have a different approach to procurement, implementation and monitoring?

Questions about Pre-Planning Phase of the Small Town Project

8. How was this project initiated and discussed in the DA?

- Did the watsan desk officer request information about the program or did communities apply first?

Was there a DA-watsan Plan?

Which actors interact before such decision is made?
- How often do they meet?
- What information is exchanged?
- Who has the final decision making power?

9. What were the interactions between the DA and the CWSA during the preparation phase of the project? For example:

What information did the CWSA provide to the DA?

Did DA members have meetings with the Cwsa/donor?

Did you agree on the decision to participate in this project?

10. How was the project launched among the communities?

- Did you visit the communities?
- Did you provide information to the Communities?
- By whom are community proposals collected and given to the Desk Officer

11. How did community selection take place? What was your in selection of community?

- How many small towns applied for the project?
- Why are these communities chosen?

Do you think that these communities are the most in need of a water and sanitat ion system?

12. Once community was selected, how was DA involved in community mobilization?

13. What was the DA s role in the formulation of the Facility Management Plan?

- Between which actors was the FMP discussed?
- Who approved?

14. Could you describe how the tariffs were set and what the role of the DA was in this process?

- Did DA make amendments?

Questions about Planning and Construction

15. What was the DA/DWST role in tendering, procurement and contracting of the private sector?

- Write, evaluate, and choose tenders (Tender Board)
- Advice, Procure the private sector (Technical Evaluation Team)

16. Were there other options discussed other than the currently chosen technology?

17. Has a feasibility study and an assessment of these small towns been conducted?

- Who were involved in these activities?

18. Construction: how is the DA/DWST involved in the construction?

- Did the Technical evaluation team have a role in choice of technology?
- Was the DWST involved during technical design and constr uction?

19. Who is the legal owner of the facilities?

Questions Capacities

20. Did the DA contribute to the 5% construction costs in the small town project?

- Is this money used from the DACF?
- Who in the district decides? How is decided on this?

21. Does the DA raise revenues? What problems are faced with raising revenues?

22. Did you participate in any training provided by the CWSA? Who else also participated?

23. Do you think that the chosen technologies and management options are sustainable?

Are the spare parts for the system easy to find when systems break down/ major repair is needed?

Are there enough actors with adequate technical skills to support the system maintenance?

24. Is there a data base for sector information and is this enough information to make District Watsan Plans?

Questions about Responsibilities

25. Does the DA have a District Water and Sanitation Plan that is being implemented?

- Searching for funds
- New projects

26. Are there 3 full time members in the DWST?

- Does the DWST have standard formats to submit reports and generate data?
- Does the DWST have access to sector information?
-Does the DWST have equipment to visit communities?

27. How are the activities of the DWST monitored by the DA?

- Request Technical Repo rts
- Request Administrative Reports
- Request Financial Reports

28. How often are audits of the WSDB's accounted by the DA?

29. How often did the community request support from the DWST? For what issues was support requested?

Are there any additional remarks or questions from you side?

ANNEX 7.

Questionnaire Water and Sanitation Development Board (WSDB)

Common Questions about the respondent and the community

1. Could you briefly explain what your function and tasks are in Water Board?

2. What groups are represented in the board? Is the DA represented?

3. Could you tell me more about the geographic situation of the community?

- How many people live in this small town?
- How many zones/communities are there?
- How many people in the community have access to water and sanitation services? (Coverage)

4. Could you tell me more about the pipe system in this small town?

- How many standpipes are there/In which communities are these build/How far are these from each other/ Area in km2 /What is the source o f the water/Is electricity used/ How is treatment/ How many household connections/ Who is the legal owner of the facilities?

Questions about Pre-Planning Phase of the Small Town Project

5. How was this project for the pipe system introduced in to this small town?

- How did you hear about the small town program?
- Did you request yourself?
- Was request applied to the CWSA or the DA?
- What was the DA s role?

6. Who were involved in community mobilization?

- DA /GTZ/ CWSA/Community/Meetings
- Were there difficulties with raising 5% funds?
- What kind of information were you provided?

7. What was your role in the formulation of the FMP?

- How was the Plan discussed with the community? Who facilitated the community meetings?
- What was the involvement of the District Assembly?

8. What is the tariff?

- How did you decide on the tariffs? What were the criteria to see whether it is acceptable or not?
- Who supported the WSDB with making a choice?
- Did the DA agree on the tariffs?

Questions about Planning and Construction

9. Which actors were involved in the technical design and construction of the system?

10. What was the WSDB role in selection of the private actors?

11. Has there been a feasibility study and an assessment of the chosen technologies and the management option?

- Did the DA have any role in this study?

12.

Questions Capacities

13. Do you think that the level of staffing is enough to operate and maintain the systems?

14. Did the community contribute to the 5% construction costs?

15 Does the DA raise revenues? What problems are faced with raising revenues?

- Revenues are enough for operation and maintenance costs?
- And if there are breakdowns? Replacement is needed?
- Is there a reserve fund?

16. Did you participate in any training provided by the CWSA? Who else also participated?

Project Management/Planning and Budgeting/ Budgeting and Financial Management/Information management (data collection, documentation)/Administration/ Procurement, tendering/Award and manage contracts and supervise private sector/ Participatory Approaches / Consensus building and conflict resolution/ Dealing with community participation and management / Monitoring Supervising /Evaluation

17. Are the spare parts for the system easy to find when systems break down/ major repair is needed?

Are there enough persons, actors that can provide technical support when needed?

18. Does the Water Board have standard formats to submit reports and generate data?

Questions about Responsibilities

19. What problems have you faced lately?

- Do pipes often breakdown?
- Conflicts between water board and community?
- Or else?

20. In case you did: who did you approach for support?

21. How often did the DWST provide you support? For what kind of issues was support provided?

22. How often does the DWST control the systems?

23. Does DA request for reports?

24. How often do you meet the DA?

25. Are there any additional remarks or questions from you side?