PROCESSES OF INSTITUTIONAL CHANGE: The Case of Small Town Water Supply Systems in Ghana

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Processen van institutionele verandering: watervoorzieningssystemen in kleine steden in Ghana

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Contents

List of Tables, Figures, Photo, Map and Appendices

Tables

Figures

Photo

Map

Appendices

Acronyms

ASTWO	Association of Small Town Water Operators
CIDA	Canadian International Development Agency
CWSA	Community Water and Sanitation Agency
CWSD	Community Water and Sanitation Division
DAs	District Assemblies
DANIDA	Danish Development Agency
DWST	District Water and Sanitation Team
ERP	Economic Recovery Programme
GOG	Government of Ghana
GWCL	Ghana Water Company Limited
GWSC	Ghana Water and Sewerage Corporation
NCWSP	National Community Water and Sanitation Programme
NORST	Northern Region Small Town Water and Sanitation Project
MDG	Millennium Development Goal
RCC	Regional Coordinating Council
WATSAN	Water and Sanitation Management Committee
WSMT	Water and Sanitation Management Team
WP	Water Personnel

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He has made everything beautiful in its time.
Ecclesiastes 3:11 (NKJV).

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Abstract

Water sector reform programmes in Ghana, including the National Community Water and Sanitation Programme (NCWSP), have sought to achieve accelerated and equitable delivery of improved water facilities to small towns and rural communities, while at the same time ensuring sustainable facility management. This achievement was to be delivered within the framework of the Government of Ghana's decentralisation agenda. However, implementation of these reforms has not led to the desired outcomes and targets. Implementation has faltered in part because the reforms have conflicted with practices within the communities implementing these programmes. Indeed, the policymakers designing the institutional arrangements under the NCWSP hardly took these local contexts into account.

The literature identifies different sets of factors by which to understand the underlying mechanisms and processes that account for institutional change. Three of these are bricolage, translation and institutional entrepreneurship. In short, to resolve conflicts that arise from the incompatibility of externally given water policies with local practices, institutional entrepreneurs use translation and bricolage to reconcile the given policies with existing practices.

The current study adopts Mollinga and Gondhalekar's (2014) stepwise small-*N*/medium-*N* qualitative comparative analysis approach to water research to specify the structures and mechanisms that explain institutional change. Application of this methodology helps us to understand what factors account for differences between given policies and actual practices in implementation, both across and within a variety of study cases. Through an in-depth exploration of six case studies in three regions of Ghana, this research investigates processes of institutional change and local perceptions of the quality of water services and the sustainability of small town water supply systems. Both quantitative and qualitative

methods are used, including original survey research (n=673), focus group discussions, in-depth interviews, semi-structured interviews, participant observation and oral histories.

Specifically, this study (i) examines contextual factors which constrain or enable institutional change; (ii) explains how institutional changes manifest in actual practices and what resources actors employ to frustrate or promote institutional change; (iii) analyses the motivating factors and logic behind actors' capacity to emerge as institutional entrepreneurs and change institutional arrangements; and (iv) explores ways in which the concepts of bricolage, translation and institutional entrepreneurship contribute to our understanding of institutional change.

Findings from the case studies demonstrate that institutional entrepreneurs, through processes of bricolage and translation, recombine and modify existing institutional principles and practices. With these recombined institutions and practices, change agents are able to address some of the challenges that emerge in the process of transferring centrally designed water policies to participating communities.

The research finds that the local social and institutional context constrains actors' understanding, interpretation and implementation of institutional change in the water sector. Yet, the constraining factors also enable institutional entrepreneurs to find solutions to pressures exerted by exogenous factors such as technological developments, economic conditions, shifts in state policies and power struggles. This has led to variation in how the NCWSP has been implemented across different communities in Ghana.

Processen van institutionele verandering: watervoorzieningssystemen in kleine steden in Ghana

Samenvatting

Het doel van programma's voor de hervorming van de watersector in Ghana, met inbegrip van het National Community Water and Sanitation Programme (NCWSP; een nationaal programma voor water en sanitaire voorzieningen), is een versnelde en rechtvaardige levering van verbeterde watervoorzieningen aan kleine steden en plattelandsgemeenschappen, terwijl tegelijkertijd een duurzaam beheer van de voorzieningen wordt gewaarborgd. Dit resultaat moest worden bereikt binnen de decentralisatieagenda van de Ghanese regering. De uitvoering van deze hervormingen heeft echter niet tot de gewenste resultaten en streefdoelen geleid. De uitvoering is deels mislukt omdat de hervormingen in botsing kwamen met de gebruiken van de gemeenschappen die deze programma's uitvoeren. De beleidsmakers die de institutionele opzet van het NCWSP hebben uitgewerkt, hielden inderdaad nauwelijks rekening met de lokale context.

In de literatuur worden verschillende groepen factoren aangewezen om de mechanismen en processen achter institutionele verandering te begrijpen. Drie daarvan zijn 'in elkaar zetten', vertaling en institutioneel ondernemerschap. Om conflicten op te lossen die voortvloeien uit de onverenigbaarheid van een extern opgelegd waterbeleid met de lokale gebruiken, vertalen institutionele ondernemers dus diverse elementen en zetten ze die in elkaar. Zo brengen zij het gevoerde beleid in overeenstemming met de bestaande praktijken.

In dit onderzoek wordt gebruikgemaakt van de stapsgewijze kleine-N/medium-N kwalitatieve vergelijkende analyse van wateronderzoek van Mollinga en Gondhalekar (2014) om de structuren en mechanismen bloot te leggen die institutionele verandering verklaren. Toepassing van deze methodologie biedt inzicht in de factoren die de verschillen verklaren tussen het gevoerde beleid en de daadwerkelijke uitvoering, zowel tussen

als binnen diverse onderzoekscasussen. Voor dit onderzoek zijn zes casestudies in drie regio's van Ghana uitgebreid bestudeerd. Op deze manier worden processen van institutionele verandering en lokale percepties van de kwaliteit van de watervoorziening en de duurzaamheid van de watervoorzieningssystemen in kleine steden onderzocht. Er zijn zowel kwantitatieve als kwalitatieve methoden gebruikt, waaronder survey onderzoek (n=673), focusgroepsdiscussies, diepte-interviews, semi-gestructureerde interviews, participerende observatie en oral history.

In het bijzonder is dit onderzoek gericht op: (i) de contextuele factoren die institutionele verandering beperken of mogelijk maken; (ii) het verklaren van hoe institutionele veranderingen in de praktijk tot uiting komen en welke middelen actoren inzetten om institutionele verandering te frustreren of te bevorderen; (iii) een analyse van de motiverende factoren en de logica achter het vermogen van actoren om zich te ontpoppen tot institutionele ondernemers en om institutionele regelingen te veranderen; en (iv) de manieren waarop de concepten 'in elkaar zetten', vertaling en institutioneel ondernemerschap bijdragen aan het inzicht in institutionele verandering.

Uit de resultaten van de casestudy's blijkt dat institutionele ondernemers door middel van in elkaar zetten en vertalen bestaande institutionele principes en praktijken opnieuw combineren en aanpassen. Met deze gerecombineerde instellingen en praktijken zijn actoren die verandering brengen in staat om uitdagingen aan te pakken die zich voordoen bij het invoeren van centraal ontworpen waterbeleid bij de deelnemende gemeenschappen.

Uit het onderzoek blijkt dat de lokale sociale en institutionele context het begrip, de interpretatie en de implementatie van institutionele verandering in de watersector beperkt. De beperkende factoren stellen institutionele ondernemers echter ook in staat om oplossingen te vinden voor de druk die ontstaat door exogene factoren zoals technologische ontwikkelingen, economische omstandigheden, verschuivingen in het overheidsbeleid en machtsstrijd. Hierdoor bestaan er verschillen tussen gemeenschappen in Ghana in de wijze waarop het NCWSP is geïmplementeerd.

1 Social and Institutional Context: Drivers for Institutional Change

1.1 Introduction

Small town and rural communities[1] are least likely to have a safe and reliable water supply. This has long been a major concern of the international development community. Thus, 1981-1990 was declared the International Drinking Water Supply and Sanitation Decade (IDWSSD), aimed at hastening provision of safe drinking water facilities throughout the world. Continuing that effort, the Millennium Development Goals (MDGs) included a target related to water. This prioritised water sector development for the benefit of all developing country citizens. Currently, the Sustainable Development Goals (SDGs) uphold the importance of expanding universal access to water services, alongside quality improvement and sustaining service levels.

These international initiatives have been central in propelling institutional reforms of small town and rural water sectors worldwide. As part of these institutional reforms, many countries have decentralised water provision to sub-national government levels (Herrera and Post 2014, Carlitz 2017). These reforms have often adopted a community management or demand-responsive approach as their default means of ensuring adequate rural water supplies (Moriarty et al. 2013: 331). These approaches hold that state intervention should be reduced, water should be perceived as a human right and an economic good, and that "people first" and empowerment goals should be pursued (Harvey and Reed 2006). Evidence suggests that these reforms did lead to an increase in new water infrastructure in rural areas and increased water supply coverage rates (Lockwood and Smits 2011: 11).

Ghana is a case in point. Institutional reforms in small town and rural water sectors implemented by the Government of Ghana and international organisations have sought to ameliorate years of low coverage and

unsustainability of existing water facilities (Karikari 1996, Fuest 2006). These efforts led to development of Ghana's National Community Water and Sanitation Programme (NCWSP). The NCWSP was implemented as part of a government decentralisation agenda and promulgated principles of the community management and demand-responsive approaches. Institutional arrangements under the NCWSP required communities (i) to contribute 5% of the investment cost of water supply infrastructure; (ii) to pay tariffs for water system operation and maintenance; and (iii) to form management groups – called water sanitation and management teams – to assume day-to-day responsibility for the water system (CWSA 2014b, 2008).

Decades into the implementation of these reforms, however, the results are disappointing. A report by the World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF) Joint Monitoring Programme for Water Supply and Sanitation (JMP) states that worldwide 83% of people living in rural areas remained without access to safe and reliable drinking water (WHO and UNICEF 2013). Most of the water supply systems constructed over the past decades experience frequent breakdowns, forcing residents to revert to unwholesome sources. A large share of the world's population still draws water from precarious sources (Lockwood and Smits 2011). Moreover, increases in population, rapid urbanisation and migration have further raised demand for water, widening the gap between those with access to water and those without (WHO and UNICEF 2013).

The majority of the water systems provided over the past decades continue to underperform. Studies have attributed the abysmal performance of rural water sectors to the lack of technical skills and capacity, inconsistency of policy guidelines, lack of information and knowledge about the water reforms, and lack of commitment and support from state actors (Eguavoen and Youkhana 2008, Nyarko 2007, Pilgrim et al. 2004a, Fuest 2006, Lockwood and Smits 2011). A number of studies conclude that the problems confronting the water sector are due to policymakers' failure to take beneficiaries' local social and institutional context into consideration (Cleaver et al. 2014, Andrews 2013). Indeed, often policymakers have focused on the regulative elements of institutions, ignoring or taking for granted the normative and cultural-cognitive elements embedded within social structures. However, these latter can constrain local actors'

capacities to implement institutional reforms. This partly accounts for the slow progress of institutional change[2] in small town and rural water sectors.

Structuralist explanations in general have ignored the role of actor agency in the slow progress of institutional changes in small town and rural water sectors. In Ghana, too, actor agency has been overlooked. Yet, accounting for agency can enable us to better understand how local water actors define their problems and interests, and the practices they adopt to resist or embrace institutional change.

In the policy implementation scholarship, different institutional settings and structures are said to account for the variation between policies as centrally designed and those actually implemented (Matland 1995: 148). Actors' lack of capacity to implement policies as designed has been attributed to institutional factors and lack of enforcement mechanisms. Others focus less on endogenous factors and actor agency, proposing a constraints-based explanation that emphasises exogenous factors. Some scholars have argued that the processes through which institutions enable and constrain are not specified in the analysis of institutions (Campbell 2004, North 1990, Campbell and Lindberg 1990). This is considered a major weakness in the work of the institutionalists (Campbell 1997, 2004: 62; Bendor et al. 2001: 188; DiMaggio 1988: 10; Skocpol 1984: 17).

Factoring actor agency into the analysis of institutions is crucial to understand how institutions emerge, change and are sustained. Nonetheless, little attention has been given to the issue of actors and their agency, which has been a major gap in the study of institutional change (e.g., Hay 2002, McAnulla 2005, Giddens 1979). By factoring actor agency into analyses of institutions, we are able to understand how actors define their problems and interests, and how they develop the ideas that inform the choices they make among alternative institutional arrangements. This is important to understand the mechanisms or processes by which institutions change (e.g., North 1990, Campbell and Lindberg 1990).

The current research contributes to the debate within institutionalist theory on how institutions change. Specifically, it seeks to understand the institutionalisation of small town and rural water reforms by investigating implementation of Ghana's National Community Water and Sanitation Programme (NCWSP). A better understanding of this centrally designed reform will advance our knowledge of processes of institutional change.[3] In particular, I examine institutional factors that have driven actors to

resist and modify institutional arrangements in implementation of Ghana's NCWSP.

This study is not about policy success or failure; nor does it delve into issues of NCWSP sustainability and its impact on users. Furthermore, this research does not seek to provide an international or national perspective on how a Ghanaian small town water reform programme was generated, including interactions between the central government and international actors such as donors and NGOs. Although this study's analysis occasionally refers to the water literature, its focus is on how local water actors have implemented the NCWSP. Thus, I look at the reasons behind actors' actions in resisting, embracing and possibly modifying new institutional arrangements in rural water supply. I employ three key concepts – translation, bricolage and institutional entrepreneurship – to explain how local actors interpreted the NCWSP and adapted local institutions and practices to implement the NCWSP and the role of institutional entrepreneurs herein. I then use the empirical findings to expand on theories of institutional change.

1.2 Objectives

The objectives of this study are four:

- to examine contextual factors that constrain or enable institutional change
- to explain how institutional changes occur in actual practice and what resources are employed to frustrate or promote institutional change
- to analyse the motivating factors and logic behind actors' capacities to emerge as institutional entrepreneurs and change institutional arrangements
- to explore ways in which the concepts of bricolage, translation and institutional entrepreneurship might contribute to understanding processes of institutional change

1.3 Specific questions

Four research questions were derived based on the research objectives mentioned above:

- What contextual differences explain variations in the implementation of the NCWSP?
- What practices have implementing actors engaged in to find solutions to pressure for institutional and technological change?
- In what ways have institutional entrepreneurs engaged in institutional change, and what were their motivations for changing institutional arrangements under the NCWSP?
- How can we account for the motivations and logic behind the practices and actions that institutional entrepreneurs ultimately employed?

1.4 Significance of the study

This study provides an exciting opportunity to advance understanding of processes of institutional change. Its main contribution is to empirically set in place a structured understanding of the institutionalisation of reform processes related to small town water supply in Ghana. The empirical findings will contribute to the ongoing debate among policy implementation scholars on what factors drive local actors to resist policy changes and what circumstances stimulate actors to embrace changes. By focusing on actor agency, I investigate the role that institutional factors and actors' access to resources have played in shaping implementation of the NCWSP. Understanding actor agency is crucial to comprehend processes of institutional modification and change. Agency, as used in the current research, refers to the capacity of actors to shape their environment.

Secondly, my focus on actor agency advances understanding of how actors define their interests and problems, and how existing institutions can enable actors to mobilise resources. The investigation of actor agency will allow us to better understand actors' choices and the practices they adopt to modify central government policies.

Ultimately, this research will contribute to scholarship on why policy or institutional change appears in a path-dependent and evolutionary manner. The results of this study support the idea that differences in implementation of institutional reforms are often triggered by pressure for change and influenced by context-related factors such as physical characteristics, the commitment and support of implementing actors, information availability, knowledge of the institutional reforms, technical and capacity gaps between implementers, and the role of institutions (both

community-led and state-led). In addition, the ideological stance of actors and their interpretations and understandings of their problems, and the kinds of institutions available to them, provide a link to the kinds of solutions or institutional arrangements that are locally crafted. The extent to which an institution will change also depends to a large extent on the availability of institutional entrepreneurs who take the initiative to make changes.

1.5 Research approach

This research adopts the stepwise small-*N*/medium-*N* qualitative comparative analysis approach to water research described by Mollinga and Gondhalekar (2014). This methodology was chosen, first, to bring out factors that can explain the diversity found in implementation of water reforms under the NCWSP in Ghana. Acknowledging and investigating this diversity can lead to a better understanding of why implementation of the programme differed across and within communities. Secondly, the methodology enables us to understand the logic and motivation that informed implementing actors' preferences, choices and actions. This advances knowledge and understanding of processes of institutional change. A third reason for choosing the stepwise small-*N*/medium-*N* qualitative comparative analysis approach is to avoid overgeneralisation and over-contextualisation of the study results.

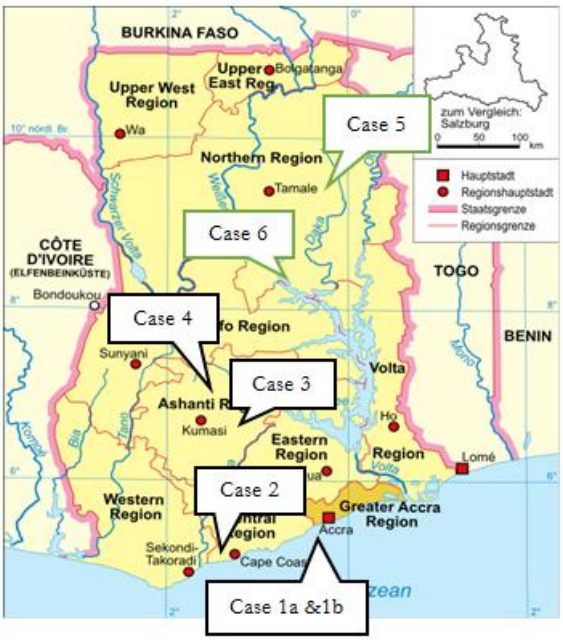
This research uses a case study approach. A case study, according to Yin (2009: 18), "is an empirical inquiry, which investigates the contemporary phenomenon in-depth, and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident". This implies that case studies normally deal with phenomena that have multiple results. Moreover, case studies use different data collection techniques, which rely on a predetermined theoretical proposition.

The methodological paths of case selection for this study represent "most similar" and "most different" typologies (Gerring 2007). Use of these typologies provides insight into structured combinational factors likely to yield particular outcomes, providing avenues towards understanding processes of institutional change and consequences of water reforms. Meaningful comparisons require factors held in common by all cases. By comparing factors across and within cases, we identify reasons for the

similarities and differences to explain diversity in policy implementation and practices.

The cases will be analysed across and within the two typologies of "most similar" and "most different" that the cases represent. Through this approach, the study limits the tendency of attributing different causality to events. My aim in adopting this approach was to understand diversity of local responses and uncover variation in implementation dynamics.

Map 1.1
Map of Ghana with study cases



Note: As at the time the data was collected, Ghana had 10 administrative regions. Currently the number of regions has increased from 10 to 16 in December 2018.

I selected six (6) cases from three regions of Ghana: the Central, Ashanti, and Northern regions. The topographical and physical conditions of each region informed their selection. That is, the coastal areas (central) are represented by cases 1 and 2, forest areas (Ashanti) are represented by cases 3 and 4, and dry areas (Northern) are represented by cases 5 and 6 (map 1.1).

Table 1.1
Characteristics of the water supply systems of the six selected cases

Causal variables	Case 1a	Case 1b	Case 2	Case 3
Population of community [a]	2,012	1,649	2,491	13,800 [b]
Size of water system	30m³ steel tank	1a and 1b share a water facility	30 m³ steel tank	90 m³ plastic tank, and 60 m³ concrete tank
Number of connections (public standpipes)	5	3	6	26
Number of private connections	27	12	21	450
Length of pipeline	9,150 mm	1a and 1b share a water facility	3,615 mm	4,000,000mm
Total water production (monthly)	1,677 m3	1a and 1b share a water facility	2,523 m³	5433m³
Per capita consumption	14 litres/ capita/day	1a and 1b share a water facility	24 litres/ capita/day	0.4 litres/ capital/day
Year of construction of water supply system	2012	1a and 1b share a water facility	2012	2002

Causal variables	Case 4	Case 5	Case 6
Population of community [a]	10,137	11,173	15,581
Size of water system	18 m³ concrete tank	349 m³steel tank, 12 m high	2no.215 m³ steel tank, 12 m high
Number of connections (public standpipes)	16	20	47
Number of private connections	125	33	42
Length of pipeline	15,000mm	17,565mm	19,916 mm
Total water production (monthly)	2883m³	33,120m³	38,3611 m³
Per capita consumption	10 litres/capita/day	35 litres/capita/day	25 litres/capita/day
Year of construction of water supply system	2002	2014	2014

a Population figures were based on 2010 Ghana population and housing census.

b The population excludes the population of a boarding school located on the outskirts of the community, though this school also depended on the water system. The school's population was 3,000.

Source: Author

1.6 Data collection

For this study, I selected two cases from each of the three selected regions, representing the most similar cases within regions and most different typologies across regions. Ghana's Community Water and Sanitation Agency (CWSA) provided background information on the selected cases. A number of factors informed case selection: population size; physical characteristics and availability and distribution of water sources; distribution of water points; length of pipeline; size of water supply system; total amount of water supplied; and age of the water system. The small town water supply system is the unit of analysis in the cases. Table 1.1 presents characteristics of the water supply systems in the six communities.

Data for this study were collected in two phases. The first phase involved collection of secondary data from state actors. These state actors include the District Assemblies (DAs) and CWSA. Regional branches of the CWSA made first-hand information available on the characteristics and performance of the water systems. In the second phase, interviews were conducted with small town water operators and key informants within each case.

Both quantitative and qualitative methods were used in this study: original survey research, focus group discussions, in-depth interviews, semi-structured interviews, participant observation and oral histories. These methods were employed at each of the six[4] field sites, representing the six cases selected.

In all, 37 semi-structured interviews were held. Interview subjects comprised 7 traditional actors, 6 water system personnel, 6 water and sanitation management team members, 6 DA personnel, 1 director of water and sanitation at CWSA headquarters, 4 regional CWSA personnel, 2 headmasters of senior high schools, 1 unit committee chairperson, 1 representative of a small town water operators' association, 1 Northern region small-town water system personnel, and 1 private operator. Further, 27 focus group sessions were held, and 673 households were surveyed.

Another key aspect of the research was participant observation of daily access to water and practices emerging from water users' daily encounters with those operating and managing the water systems. This was done by personally staying in each of the respective areas for a period of seven to fourteen days, to gain first-hand information on day-to-day activities.

Pictures were taken and audio recordings made during the focus group sessions and interviews.

1.7 Introduction to the cases

1.7.1 Case 1 (1a and1b)

Nyamedom/Asuase water system, representing case 1a and 1b, are located in the central region of Ghana in Abura Asebu Kwaman District. Both cases had abundant alternative water sources and favourable landscape. Case 1a had three localities, namely Kayeifi, Nyammedom and Zongo. Case 1b, also had three localities, namely Aboatre, Anafo and Mantimakibi. The total population of each community did not meet the required thresholds to qualify for a small town water facility project, hence the two communities were merged.

The European Union (EU) constructed case 1's water facility in 2012. Members of the two communities contributed 5% of the total cost of water supply system. The DA Abura Asebu Kwaman contributed 5%, with the remaining balance 90% provided by the EU.

Case 1a did not have a functioning chieftaincy lineage. The chief of the community served as the overlord of the land, holding it in trust, for the chief of Abakrampa, an adjoining town. Most inhabitants in case 1a did not share common kinship. They were migrants, working at two major institutions located in Nyamedom: the Asuase Technical Institute (established in 1914) and the Ausase Farm Institute (established in 1962). In Case 1b, the traditional chief did have a clear chieftaincy lineage. The majority of the inhabitants shared a common heritage and had close family ties and relationships. There was an influential traditional authority in the operations and management of the water system. Both in the pre- and post-construction phase. The traditional chiefs had a representative on the water and sanitation management teams.

The water system in case 1a and 1b was under community-based management. Two sets of water teams were in place in 2010 and 2015.[5] There were 11 water and sanitation team members.[6] Four of the 11 members were illiterate, without formal education, and the few who were literate did not have the required technical capacity to manage the water system (see appendix 12). The water facility was being managed by the following personnel: a systems operator, a technical operator, a financial officer and six water vendors (see appendix 13).

1.7.2 Case 2

Kyearkor water system represents case 2. The water system is located in the Central region of Ghana in Mfantsiman Municipal Assembly. Similar to case 1, case 2 had abundant water resources with a favourable landscape. The total population was 2,491 and there were six public standpipes located in various parts of the community: Abom, Anafo, Mangoase, Mantimakibi 1 and 2 and Onyaase (see appendix 9). The EU constructed the water facility, like in case 1, in 2012. Members of the communities contributed 5% of the total cost of water supply system. The municipal administration of Mfantisiman contributed 5% of the total cost, with the remaining 90% provided by the EU.

Kyerkor is under the Abeaze traditional area under the paramount chief of Abeaze Dominase. The community traces its lineage to a common ancestor and the majority of inhabitants enjoy close family ties and relationships. Traditional actors here are active and influential in the day-to-day activities of the community. They were thus also highly involved in management of the water system during the pre-construction phase. The traditional actors have no representative on the water and sanitation management team.

Case 2 is operated under community-based management. The water and sanitation management team in this case was incomplete (appendix 12). There were three water and sanitation team members. Also managing the water facility were two water personnel, comprising an accounts officer and a plumber, and six water vendors (see appendix 13).

1.7.3 Case 3

Wiamaose water system is in the Sekyere South District of the Ashanti Region of Ghana. This water system represents case 3. Wiamoase's topography was challenging, hence making it difficult to drill boreholes or construct a hand-dug well. The community had a population of 13,800, excluding the Okomfo Anokye Senior High School. This school itself had a population of about 3,000 and was located in the community and relied on its water system. Five DA members represented the community's five electoral areas of Dominanase South, Dominanase West, Amangoease, Gyeidi Tanosu and Ankase. Each of these had five community assembly units. Together with the DA members, these formed the area town councils representing the lower tier of governance. The electoral area was

represented by the following localities: Adum, Amangoase, Ankase, Behenase, Bethlehem, Brofoyedru, Cocoaline, Domenanse, Gyidimission, Krobo, Nima, Tanoso and Zongo.

Wiamaose was one of the few communities that benefited from EU small town restructuring projects that started in 1998. Wiamoase water supply system was completed and handed over to the community in 2002. As part of the condition to qualify for the project, the community had to mobilise themselves and pay 5% of the total cost of the water facility. Sekyere South District contributed 5% and the EU paid the remaining 90% of the total cost of water supply system.

The community had a recognised chief under Mampong traditional paramount chieftaincy. Most community members shared a common heritage and kinship. The majority of the inhabitants were farmers and traders, with the rest being migrants working in organisations in the community.

There was an active and influential traditional authority. This included operations and management of the water system, in both the pre-construction and post-construction phases. A representative of the traditional authority was on the water and sanitation management teams and played an active role in management of the water system.

The water system had 15 water and sanitation team members (appendix 12). All 15 members were literate. The initial water and sanitation management team was put in place in 1998 and stayed in function until 2002. The second team was put in place in 2004 and dissolved after most members resigned, leaving three members, comprising two men and a woman. A third water and sanitation team was put in place in 2011.

The water facility was managed by seven water personnel (appendix 13), comprising an accounts officer, a revenue collector and two technical operators/plumbers, two security staff. Further, there were 26 vendors. Detailed knowledge was high among the water actors regarding the water project and rules and regulations, as most staff had been with the water system since its inception.

1.7.4 Case 4

The Juaso Obogu water system is located in the Ashanti Akyem South District of the Ashanti region. This water system represents case 4. Juaso Obogu had a population of 10,137.

There were four assembly members and 20 unit committee members, representing the following electoral areas: Obogu West, Obogu East, Kroboline and Salem. The community was represented by the following localities: Askifoamantem, Bremaso, Court hall, D/A School, Dentemu, Domeabrah Ebonmu, Kroboline, Mission, Police Station Area, Presby School, Zongo and Zongo Extension.

Juaso Obogo faced a challenging topography in some parts of the community. Distribution of water to these areas was difficult and no alternative water sources were available. The rest of the community was located on low lands water distribution was easy and there was an abundance of alternative water sources.

Juaso Obogu water supply system was part of the EU small towns restructuring project, which started in 1998, and the water facility was completed and handed over in March 2002. To benefit from the project, the community had to pay 5% of the total construction cost for the water system. The remaining costs were distributed as follows: 5% was paid by the Ashanti Akyem South District and 90% was paid by the EU. At the time of data collection, the water system operated from one borehole. There was a second borehole, but the submersible pump attached to it had broken down six years ago. The community had a chief in the Ashanti Akyem traditional areas. Inhabitants shared strong kinship ties and followed a common ancestral lineage. The traditional chiefs were active and influential in both the pre-construction and post-construction phases of the water project. The chiefs had a representative on the water and sanitation management team and was active in management of the water supply system. In the community there was a substantial number of migrant workers engaged in gold mining on a small-scale basis.

The Juaso Obogu water system was under community-based management. It had a 10-member water and sanitation management team. In 1998, the first water and sanitation team was established. That team worked until 31 December 2011. A new management team was established to replace the old one following public outcry calling for its dissolution. Most water and sanitation team members were literate and had an appreciable understanding of technical and financial-related issues. Regarding water personnel, there were four (see appendix 13), comprised of a system manager, an accounts officer, a revenue collector and a technical operator, alongside 14 vendors. Apart from the accountant, who had been

with the water system since its inception, none of the remaining personnel had received training.

1.7.5 Case 5

Tatale serves as the administrative capital for the Tatale–Sangule district. The Tatale water system is located in this district in the Northern region of Ghana. This water system represents case 5 in this study. The community population was 11,173.

There were four assembly members and 25 unit committee members, representing four electoral areas, namely, O Section, Kuyuli, Binatabe and Nakpali with thirty-four (34) sections. Tatale faced a challenging topography for water supply. Its low water table meant that few alternative water sources were available.

Tatale was one of the 30 small town communities that benefitted from the Northern Region Small Town Water and Sanitation Project (NORST). The Canadian International Development Agency (CIDA) financed the project. The Member of Parliament for Tatale Township paid the 5% community contribution to the cost of the water project. The DA paid 5% percent of the total cost, with the remaining 90% provided by CIDA. Implementation of the water project started in 2010. The actual water system was completed and handed over to the community in November 2014.

There were two dominant ethnic groups in the community, with three other minority ethnic groups. Each ethnic group shared a common lineage. Tatale had one paramount chief representing the majority Basare ethnic group. The traditional chiefs were active and influential during the preconstruction phase. The traditional chiefs had a representative on the water and sanitation management team. However, the influence of the traditional chief in management of the water system was low.

The main occupations here were farming and trading. The community had a substantial number of migrant workers. It also shared a boundary with Togo and had a vibrant market.

Tatale water system was under private-based management. The water and sanitation team was established at an early stage of the project. It had nine members (see appendix 12). Four of these nine members had a formal education. There were five water personnel staff (appendix 13): a system manager, an accounts officer, a revenue collector, a technical operator and a plumber, alongside 20 vendors (of whom seven were eventually

sacked). All key staff with the exception of the accountant[7] had received two years' training before the water system was completed and handed over to the community.

1.7.6 Case 6

Karaga water system is located in the Northern region of Ghana, in the Karaga district. It represents case 6 for this study. Its population was 15,581. Most inhabitants of the community were Dagombas. The township comprised the following localities: Daafong, Limanfong, Kanbontooni, Kpanafong, Nakohagufong, Nayilifong, Nlaalafong and Yapalsifong. There were four DA members, representing the four electoral areas of Karaga Central, Karaga West, Karaga East and Karaga North. Tatale had a challenging topography and low water table. As a result, there was an absence of alternative natural water sources.

Like Tatale, the Karaga water system was part of NORST, with assistance provided by CIDA. The water project started in 2010 and was completed and handed to the community in November 2014. The community's Member of Parliament arranged payment of the community's 5% contribution. The DA paid 5% of the cost, and the remaining 90% was paid for by CIDA. The system was completed and handed over to the community in 2014. At the time of this research, the water system relied on two of the four boreholes provided, as two of the submersible pumps were not functioning. Water had to be rationed at each public standpipe.

The community had a paramount chief with other divisional chiefs. The main occupation of the residents was farming. A representative of the traditional authority was part of the water and sanitation management team. Traditional chief were active and involved in the management of the water system. Karaga was the administrative capital of the district, and a few migrants worked for the various state organisations located within the community.

The water and sanitation team had 13 members and was constituted during the early stages of the project, in 2010 (see appendix 12). Two of the 13 members had a formal education. There were four members of staff (see appendix 13): an accounts officer, two revenue collectors and a technical operator. Forty-six (46) vendors were active. With the exception of the technical operator, all water personnel had undergone training.[8]

1.8 Organisation of thesis

Chapter 2 provides an overview of the literature on water services, and chapter 3 presents the conceptual framework that guided this research. Chapter 4 examines development of the small town and rural water sector in Ghana. Chapters 5 and 6 examine the interactions and practices of actors in the processes of translating and implementing the NCWSP in their own locality. Chapter 7 focuses on institutional entrepreneurs and their motivations for engaging in or resisting institutional changes. Chapter 8 summarises the study findings and presents the conclusion of the research.

Notes

[1] I use the terms "small town" and "rural communities" interchangeably in this thesis.

[2] This study defines institutional change as encompassing the forces that drive actors to resist, renegotiate and modify institutions and institutional arrangements.

[3] This study views processes of institutional change as encompassing the conscious and unconscious activities of negotiation, decision-making, action and interaction, and practices which actors identified in this study as used by institutional entrepreneurs and change agents to make creative and innovative modifications in the way water was governed (Frank and Cleaver 2007).

[4] Two communities, Nyamedom and Asuase, represent cases 1a and 1b. They shared a common water system and management team. However, they did not share a common traditional governance system or lineage.

[5] At the time of data collection the second team had not been constituted. The second team was elected in December 2015.

[6] The water team members observed and interviewed were the first team constituted in 2010.

[7] The first accountant was trained but resigned and a new officer was recruited.

[8] The current technical operator took the position when the initially trained technical operator resigned from the job. He was originally trained as a revenue collector.

2 Rural Water Supply Services and Reforms

2.1 History of rural water supply

The years 1981-1990 were declared the International Drinking Water Supply and Sanitation Decade (IDWSSD) aimed at providing the world population with safe drinking water and hygienic excreta disposal facilities. Nonetheless, studies carried out in this decade and since underline problems related to operation and maintenance of water and sanitation systems. In particular, there is a disparity between the ready availability of development funds (for construction) and the scarcity of recurrent funds (for operation and maintenance). These problems have propelled various institutional reforms in the water sector (Feachem 1980: 16, Harvey and Reed 2006).

Many of the unresolved challenges in water supply have been linked to a lack of participation among beneficiaries. This led to a general paradigm shift (Gleick 2000) from supply-driven and centralised water supply to demand-driven and decentralised water systems, leading to reforms reflective of the institutional thinking at the time (Fuest 2006). The World Bank, for example, promoted demand-responsive approaches. These were deeply rooted in neoliberal thinking and sought to minimise state intervention in water sector activities.

Many reforms in small town and rural water sectors coincided with structural adjustment programmes (Harvey and Reed 2004, Koehler et al. 2015). At the same time, community management principles were being promoted. Thus, communities were brought into decision-making processes and asked to take part in selection of the technology most appropriate to their needs. Beneficiary communities were also asked to contribute towards investment costs for construction of new water supply facilities, and to assume responsibility for the future operation and maintenance of their water system (World Bank 1998). This approach, according

to community management proponents, would ensure access and sustainable management and maintenance of rural water supply systems.

Yet, critics have argued that the international community favoured community management mainly as a way to reduce state involvement in water services provision. Community management was also said to offer a convenient way for international actors to produce concrete evidence of programme results (output) (Harvey and Reed 2006, Moriarty et al. 2013).

Despite the criticisms of community management, by the end of the international water and sanitation decade substantial progress had been registered in terms of new infrastructure development, especially in sub-Saharan Africa. According to the WHO and UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP), the majority of countries met the target of global access to safe water five years before the end of the MDG period, which was 2015, and just a few countries failed to achieve the target by 2015 (World Bank Group 2017, Moriarty et al. 2013: 331). In rural communities, access to improved water sources increased from 62% in 1990 to 81% in 2010 (World Bank Group 2017, Moriarty et al. 2013: 331).

In Ghana, the first two decades of the 2000s saw rapid development of new small town and rural water supply systems. These expanded access to safe drinking water among small town and rural communities. According to the JMP of 2010, 78% of the population of Ghana had achieved the MDG target of access to improved water sources by that time. By 2015, that figure had risen to 89% for the combined urban and rural population and was 84% for rural communities alone (Lockwood et al. 2016, Lockwood and Smits 2011).

Despite gains made in the water sector, critics have continued to assert that the principles of community management and the demand-responsive approach had not led to ensured access to safe water. Indeed, sustainability of water infrastructure is an issue that still confronts rural water sectors. Urgent attention is required to sustain the gains made. Moreover, population growth, rapid urbanisation and migration have further increased demand for water, widening the gap between those with access to water and those without. The JMP estimates that worldwide, 83% of those without access to improved drinking water live in rural areas (WHO and UNICEF 2013).

A large share of the world's population still draws water from precarious sources. Furthermore, the quality of water services presents a disturbing picture. Most water systems are unreliable due to frequent breakdowns, forcing residents to revert to unwholesome sources. Even for many who do have access to improved services, the day-to-day reality is one of poor service in terms of water quantity, quality, reliability and accessibility (Lockwood and Smits 2011).

Moriarty et al. (2013) proposed that in order to ensure universal access a shift is needed away from provision of one-time access towards improvement of the quality of services overall. Along similar lines, previous studies conclude that to sustain the gains made in rural water supply, continuous institutional support is needed for local water actors, accompanied by water supply to households and smaller user groups (Harvey and Kayaga 2003), and private sector service delivery (Harvey and Reed 2006).

Notwithstanding the issues raised above, it is important to note that the focus of the current research is not system sustainability. Nor do I seek to evaluate the success of the water reforms in Ghana. Rather, this research seeks to understand how implementing actors relied on existing institutions and practices to resist or modify the institutional arrangements introduced in line with the principles of community management and the demand-responsive approach. Specifically, I look at the implementation of the NCWSP, which is a water reform programme targeting small town and rural communities in Ghana. This programme, elaborated further in chapter 4, likewise adopts principles of community management and the demand-responsive approach.

2.2 Community management of water supply systems

Evidence indicates that in Ghana, adoption of community management and the demand-responsive approach has not led to the institutional changes envisaged by international actors and national policymakers. Low quality of water services, poor performance of service providers, high rates of hardware failure and inability to stay within operations and maintenance budgets are some of the challenges confronting the sector (Doe and Khan 2004, McCommon et al. 1990, Moriarty et al. 2013).

The objective of community management is to empower beneficiaries to take an active role in decision-making processes, such as planning, construction, management, operations and maintenance of their water supply

system (Lockwood 2004, Koehler et al. 2015). Community management objectives are to be achieved by requiring the beneficiary community to pay part of the initial cost of construction of the water facilities, by formation of groups to manage the water system, and by establishment of water tariffs adequate to cover all operations and maintenance costs (Moriarty et al. 2013, Harvey and Reed 2006).

Findings are mixed regarding whether communities thus empowered will necessarily take ownership and responsibility for their water facility. Some scholars assert that empowering communities may not trigger the desire to take ownership and responsibility (Harvey and Reed 2006). A number of studies fail to find any direct relationship between community ownership and beneficiary willingness to take responsibility for service management and recovery of operations and maintenance costs (e.g., Tidemand and Knudsen 1989, Cotton and Tayler 1994, Niedrum 1994, Bossuyt and Laporte 1995). Nonetheless, water system sustainability is often dependent on such willingness. Among those arguing the importance of community ownership and its direct impact on operations and maintenance, many refer to the influence of individual or private property for which a clear procedure for acquisition can be identified, as this is said to enhance the sense of ownership (Fuest 2006). For example, Bacho's (2001) study of six communities in Ghana supports the theoretical position that a clear procedure for acquiring communal property rights strengthens the sense of ownership. This conclusion was affirmed by the Community Water and Sanitation Agency (CWSA) in a study of water systems in the Northern region of Ghana. In regard to small town systems, CWSA (2002) found a direct relationship between contributions to capital costs and appropriate operation and maintenance. Yet, that same study found that some communities exhibited a strong sense of ownership and responsibility, despite their inability to raise the required capital cost contributions (Fuest 2006). Other CWSA findings point to a weak relationship between contributions to capital costs and effective operation and maintenance of water facilities.

Multiple studies observe that community ownership is not the same as individual ownership. Harvey and Reed (2006: 371) provided the following reasons why community ownership may differ from individual ownership: lack of a clear or legal identity regarding what constitutes the community, location of facilities at unequal distance from intended beneficiaries, unfairness stemming from differences in ability to pay,

disagreements between families and unequal power relations. Furthermore, the perception that the government is solely responsible for operations and maintenance may still be entrenched, leading to community resistance towards taking on ownership and responsibility for operations and maintenance.

Corroborating the above, studies suggest that differences in the clarity of legal ownership versus physical ownership contribute to the challenges confronting the water sector. For example, abundant documented and anecdotal evidence points to the appropriation of water system ownership by powerful elites. Fuest (2006: 34), for instance, maintained that "[O]wnership of piped systems in small towns in Ghana [seems] to be more vague and negotiable... [D]epending on the context, the District Assemblies (DAs), the communities or their chiefs were conceived to be the owners." Claims of ownership can also vary according to the origins of the capital cost contributions. Where DAs supported communities to mobilise the 5% contribution to system construction or even fully paid the sum they perceived themselves as owners, with the local water and sanitation management teams deemed as holding the systems in trust for the DAs. Contributions towards the cost of water systems raise a further unresolved question; that is, if the water systems belong to the community, then could the chiefs, as custodians, be construed as the legitimate owners and thus lay claim to the systems in the future. This institutional structure was thus perceived as potentially giving rise to resistance and producing future claims and counter-claims for the systems between DAs, water and sanitation management teams and chiefs (Fuest 2006, Prado and Trebilcock 2009).

Others have maintained that community management is effective when communities have the legal right to assume ownership and responsibility. However, in Ghana legal rights to small town water systems are vested in the local authorities (DAs). This may explain some of the setbacks experienced, in which local authorities (municipal assemblies or DAs) have taken decisions counter to the interests of the communities (Fuest 2006).

Limitations of the community management approach, as observed by Harvey and Lock (2006), typically begin emerging one to three years after a system is transferred to beneficiaries. For this, a number of reasons have been identified. First, the voluntarism nature of the community management concept prevents recruitment of professional personnel to manage the water system. Secondly, there is no formal mechanism for replacing

and training technical staff and water and sanitation management team members, though these positions regularly become vacant. Thirdly, there is a lack of transparency and accountability, which leads to mistrust and suspicion of the motives of water system managers. Fourthly, the committees in charge of the water systems lack any legal status and authority, and the communities they serve may lack cohesion. Finally, if there is a lack of support from local government staff, the community will be left with a sense of abandonment and both existing and potential members of water committees demotivated (Harvey and Lock 2006). Adding cost recovery to operations and maintenance costs is not realistic, as tariffs are invariably too low to even cover day-to-day system expenses, upgrades, rehabilitation and future expansion (Harvey 2007).

Altogether, these issues cast doubt on the suitability of community management as an appropriate model for managing small town and rural water facilities. Experiences suggest that there is no silver bullet or single model that is automatically suitable for water supply in all small towns and rural communities (Moriarty et al. 2002). Likewise, in Ghana problems seem inevitable in implementing community management principles in small town and rural water supply. The current research examines the extent to which the local social and institutional context and actors have promoted or resisted the community management principles under the NCWSP. The aim is not to identify challenges and limitations of community management. Rather, the objective is to understand the motivations and strategies adopted by implementing actors to resist or modify the given institutional arrangements.[1] Examples of these are the contributions required towards the cost of water facilities (5% of investment cost), the formation of users groups (e.g., the water and sanitation management teams) and the post-construction operation and management of the water system.

2.3 Community participation

Community participation is often considered a prerequisite for sustainable and efficient management of small town and rural water systems. At the same time, the very notion of community participation has been labelled a buzzword, meaning nothing and meaning everything (Feachem 1980). Certainly, community "participation" has an air of ambiguity, and is a vague and open concept. It is typically used in a way that incorporates

other key concepts, such as "self-help", "self-reliance", "user choice", "community involvement" and "participatory planning and development", all of which are similarly ill-defined (Feachem 1980: 19). Other scholars note variation in the way participation is interpreted and its purpose defined. The current research defines community participation as a consultative empowerment process in which communities are involved in decision-making and share control over development initiatives, decisions and resources that affect them (Garande and Dagg 2005, Shah 1998, Harvey and Reed 2006). Several studies point to community involvement in decision-making as a prerequisite to ownership. There is ongoing debate, however, around the role of motivation in ensuring future and continuous participation (Batchelor et al. 2000).

Community participation is said to bring multiple benefits: (i) improved designs, (ii) reduced construction costs, (iii) reduced costs of operation and maintenance, (iv) improved realisation of project benefits and (v) encouragement of communities to engage in new development initiatives (see Cairncross et al. 1980, Feachem et al. 1978). The above reasons, according to Feachem (1980), have been used to justify international donors' preference for community management of rural water systems.

Notwithstanding the benefits attributed to community participation, Feachem (1980) provided reasons why community participation may not live up to expectations. First, there may be a lack of information sharing and communication between the community and local government staff. Secondly, the extra responsibility and cost may place too much of a burden on already overstretched and understaffed local governments. In this regard, Feachem (1980) argued for strong local government structures; this according to him, would make community participation unnecessary. An efficient water supply system, according to Feachem, hinges on efficient local government built over many years but not built hurriedly to serve the specific needs of the International Drinking Water Supply and Sanitation Decade (Feachem 1980: 22). Lack of support from local government, apathy and lack of consensus makes local participation in management of water systems challenging.

Another critique of community participation is that it entails a homogenous view of communities as having particular social and human capital which can be tapped to propel development (Cleaver 1999). Yet, the idea of a homogenous community is deceptive, as those who take decisions are not necessarily the ones who make the rules. Communities are socially

structured, stratified and guided by hierarchical institutions (Ostrom 2005, Cleaver 1999).

Some scholars maintain that the notion of community cooperation and ownership is not applicable to all sub-Sharan African communities. First, the assumption of a unitary community fails to recognise the complexity of local networks of resource use, decision-making and social interaction. Secondly, the community is a site of both solidarity and conflict, as well as unequal power relations and social structures (Cleaver 1999). Others argue that in most communities, especially in sub-Saharan Africa, decision-making is "vertical and stratified according to power, social status, and economic rank" (Elwert and Bierschenk 1988: 102). Unequal power relationships are said to define who, what and how issues are decided (Harvey and Reed 2006). Because of unequal power relations, any development intervention must give due consideration to issues of power and politics. There is ample evidence that structural and resource constraints within communities make cooperation challenging. Lastly, the notion of participation overlooks issues of motivation and incentives, and impacts on individuals' time are often underestimated or ignored (Cleaver 1999, 2012; Gaventa 2004; Gbedemah 2011). Based on the above reasons and others, community participation may not be successful as a tool to ensure community ownership and communities' adequate management and maintenance of water facilities.

My aim in the current research is not to delve into the challenges and limitations of participatory approaches. Instead I look at how actors' local social and institutional environment influences their choices to resist or promote community participation principles. In other words, I look at what, how and who takes decisions that lead to the embedment of community participation principles within local institutional and social structures. The above review helps us to identify possible reasons for actors' behaviour to support or frustrate participatory approaches. In short, this research looks at what informs actors' decisions to engage in some practices in some situations and engage in different practices other settings.

Elite capture

A foremost critique within the literature on participation is that it leads to elite capture (Platteau 2004, Platteau and Abraham 2002, Labonte 2011,

Lund and Saito-Jensen 2013, Fritzen 2007). Elite capture connotes situations wherein decision-making is controlled, public goods are exploited or resources appropriated for personal benefit (Ribot 2004, Platteau and Abraham 2002). Some scholars argue that elite capture is an unintended consequence of participatory initiatives, due to unequal power relationships among actors (Bandiaky 2008, Cleaver 2005, Mosse 1995). Others, such as Agarwal (1997), Platteau and Abraham (2002), Cleaver (2005) and Bandiaky (2007), also argue that embedded social norms reproduce and reinforce power relations and domination by elites at the expense of non-elites, making it easy for elites to control participatory initiatives or resist institutional change (Lund and Saito-Jensen 2013: 5). Stratification of communities along lines of wealth, ethnicity, class, political affiliation and norms enables some actors to access and control resources. The powerful actors then capitalise on their position to their benefit at the expense of non-elites (Lund and Saito-Jensen 2013: 3).

Platteau (2004) maintained that participatory approaches must ensure genuine empowerment through capacity building of local actors, in order to prevent powerful elites from taking advantage of knowledge gaps for their own benefit (see Rahman 1993). Esman and Uphoff (1984) pointed out that the use of user groups in community-based projects encourages elites to take leadership roles because of the attractiveness of outside funding, which elites appropriate for themselves using their positions.

Other scholars (Classen et al. 2008, Long 2001, Saito-Jensen et al. 2010) remind us that actors are not static but possess agency to resist elite domination and control. Countering or renegotiating elite or entrepreneurial capture, however, requires state action or an alliance with another interest group able to arrest excessive elite control (Lund and Saito-Jensen 2013: 5).

Limiting the occurrence of elite capture requires an understanding of the local social and institutional context, of actors' access to information and of state actors' ability to enforce rules and provide institutional support (Platteau and Abraham 2002). In addition, the extent to which actors are involved in decision-making processes and a genuine intention to decentralise administrative powers from state to local actors can reduce elite capture.

Notwithstanding the argument that elites capture resources for their own benefit, some scholars are of the opinion that the debate on elite capture should focus on the nature of actors' actions (i.e., are the actions

benevolent or malevolent), accountability-related issues and outcomes in terms of resource distribution (Lund and Saito-Jensen 2013). Platteau (2004) pointed out that not all elites profit from public resources or capture benefits from development projects and aid. There is evidence of elites' use of power inequalities to benefit non-elites (see Ravallion 2000).

I acknowledge that elite capture is an unintended consequence of participatory initiatives due to unequal power relationships among actors. I also acknowledge that elite capture can be minimised if actors possess adequate information and have the institutional capacity to manage development initiatives, and if there is a genuine intention to decentralise administrative powers from state to local actors. The focus on elite capture in this research seeks to understand practices initiated by elites to resist or modify institutional arrangements in the governance of small town and rural water supply systems. I hereby argue that actors are not static but possess agency to resist elite control.

2.4 Limitations in implementing institutional reforms: Between policy and practice

There are two schools of thought on what is an effective way to study and descibe policy implementation. Top-down theorists (e.g., Van Meter and Van Horn 1975, Mazmanian and Sabatier 1983, Mazmanian and Sabatier 1980) "see implementation as concerned with the degree to which the actions of implementing officials and target groups coincide with the goals embodied in authoritative decision" (Matland 1995: 146). Authoritative decisions here are decisions made by centrally positioned actors. Bottom-up theorists (e.g., Berman 1980, Hjern and Porter 1981, Hjern and Hull 1982, Hjern 1982, Lipsky 1969) perceive implementation more broadly from the perspective of the target population and service delivered (Matland 1995: 146).

Reasons provided for why the implementation of public policies may not achieve the desired objectives differ between the two schools. Top-down theorists (e.g., Sabatier and Mazmanian 1979) maintain that successful policy implementation is contingent on clear and consistent objectives, incorporation of adequate causal theory, financial resources and availability of implementing actors with the required skills and capacity (Matland 1995).

Bottom-up theorists, on the other hand, argue that implementers may be unable to achieve policy objectives due to interactions between the macro level (central policymakers) and the micro level (policy implementers). Most implementation challenges, according to Berman (1978), occur at the micro level. Differences between implementing actors' institutional settings and structures are said to account for the variation between policy as designed at the macro level and actual implementation (Matland 1995: 148). Other reasons provided for problems of policy implementation include the following: (i) countries with ailing government are not committed to reforms; (ii) lack of the right institutional structures delays the desired impact of institutional reforms; (iii) the context is challenging; (iv) there is corruption, neopatrimonialism and a lack of capacity among implementing countries and actors (Andrews 2013).

For example, empirical findings from the Africa Power and Politics Programme (APPP) indicate that institutional incoherence in policy initiatives, weak top-down performance and an inhospitable environment for local problem-solving are responsible for disparities between reform principles, implementation and outcomes (Booth 2009). However, there is ample evidence showing that even if the right rules and institutional framework are adopted, the impact of most policy reforms remains disappointing. The explanations provided, however, hardly advance beyond long lists of reasons for institutional reform and symptoms of implementation failure. In short, the underlying processes that explain why policy change is path dependent and slow to achieve the desired impact remain ill-defined.

In the policy implementation literature, street-level actors or bureaucrats are cast as the main implementers of policies (Lipsky 1980). These actors are said to engage in different practices and strategies to circumvent challenges encountered in the course of implementation (Maynard-Moody et al. 1990). The implication here is that policy adaptation is required for policy implementation. However, street-level actors may take advantage of challenges to serve their own interests, which could explain why institutional reforms may fail to achieve their intended objectives (see, e.g., Lindblom 1979). This explanation is unsatisfactory, however, because it fails to specify the process through which actors define their problems and interests and the strategies they use to resist and modify institutional arrangements. Shifting our focus from the discretion of street-level actors to actor agency may provide a better understanding of the motivations and

logic behind the actions of those involved. Theory regarding the agency of street-level actors can therefore help us to better understand processes of policy or institutional change (Maynard-Moody et al. 1990).

Towards explaining processes of institutional change in implementing small town and rural water reforms

In the water literature, contextual factors have been used to justify actors' inability to implement policies and achieve intended objectives. For instance, water sector studies carried out by Saleth and Dinar (2000) in 11 countries suggest that both endogenous and exogenous factors drive institutional change. Nonetheless, the processes through which actors define their interests and make choices are left unspecified.

Molle (2005), in studies in the Mekong region, showed that implementation faltered in part because reformers were expert-driven and ignored the endogenous negotiation process. As a result, the impacts of reforms were not felt, and there was a significant gap between the rhetoric of participation and reality on the ground (Molle 2005).

Likewise, the "going with the grain" governance approach is grounded on the notion that neglect of socially embedded institutions is the reason for many of the challenges that hinder ongoing interventions in the water sector (Rusca and Schwartz 2014). In the same vein, Rusca et al. (2015) in their article "Adapting Generic Models through Bricolage" noted that the dynamic environment allowed actors to adapt water models to fit the local institutional context. Nonetheless, due to unequal power relations, local elites were able to capture benefits from new water initiatives, to the detriment of others.

Nyarko (2007: 199) studied drivers of performance in the drinking water sector in Ghana. This author provided several reasons for the poor performance of urban and small town water supply: inadequate funding for investment and operations, inadequate incentive systems, low water tariffs, low capacity of water actors and political interference.

In a study in the Akatsi district of Ghana, Gbedemah (2011) also recognised weak incentives, alongside a lack of consensus between members of water and sanitation management teams and other water system personnel. These obstacles considerably challenged the adoption of community management principles in water governance.

Together, these studies outline various factors responsible for water reform failures. However, none of these causal factors specify the mechanisms that justify the importance of context. They are, rather, structuralist explanations, with actor agency ignored or taken for granted. Investigating the role of actors and agency could provide a better understanding of how local water actors define their problems and interests and the practices they adopt to resist, embrace or modify institutional arrangements for water management.

The community management concept as applied to governing rural water supply entails, for example, group formation, definition of rights and responsibilities, and clarification of issues of access to potable water and management of the water system. These cannot be divorced from the cultural, socio-economic and political environment within which they occur (Fuest 2006: 7). These institutional factors constrain actors' capacity to implement institutional reforms. Nonetheless, they also determine the extent to which actors can resist or promote institutional change (DiMaggio and Powell 1983, Fligstein and Freeland 1995). Notwithstanding the importance of institutions in constraining and enabling those involved in activating their agency, the conditions under which actors use institutions to activate their agency are insufficiently accounted for in most water studies.

The current research fills that gap by examining institutional factors driving actors to resist or modify institutional arrangements in implementation of community management and the demand-responsive approach in rural water governance. Specifically, I look at the implementation of the NCWSP, which is a water reform programme targeting small town and rural communities in Ghana. This programme, elaborated further in chapter 4, upholds principles of community management and the demand-responsive approach.

The contribution of this thesis is three-fold. First, based on the NCWSP, it investigates why policies are modified and adapted by local implementing actors, thus contributing to the debate on policy implementation. I look at the role of institutional factors and actors' access to resources in shaping the implementation of the NCWSP. Understanding actor agency is crucial to understand processes of institutional change. Agency, as used in this research, refers to the capacity of actors to shape their environment.

Secondly, by focusing on actor agency, this thesis advances understanding of how actors define their interests and problems, and how existing

institutions enable actors to mobilise resources, to make decisions and to adopt practices to modify central government policies. Through this approach, it contributes to scholarship on the evolutionary nature of policy or institutional change.

Thirdly, this thesis presents new knowledge to deepen our understanding of why and how actors do what they do to resist or modify institutional arrangements for rural water policies, particularly under the NCWSP. This aids us in understanding the processes and conditions in which institutions change, and limits the possibility of misidentifying the challenges facing the rural water sector. Furthermore, it looks at how the institutional setting influences the choices, preferences and practices that institutional entrepreneurs ultimately adopted in response to pressure for institutional and technological change.

I use an interdisciplinary lens to explain change in the water sector. The focus on institutional factors provides a path to unravel the complexities of human nature and human action. In traversing this path, I hope to arrive at a better understanding of why institutional reform in the rural water sector proceeds slowly, changeably and in a path-dependent manner. Indeed, institutions are the foundation of life. They consist of state-led and community-led rules, monitoring and enforcement mechanisms, and systems of meaning that define the contexts in which individuals interact with each other to perform their roles and carry out their responsibilities (Campbell 2004: 1).

Institutions are the focus of chapter 3. In it, a review of the institutional change literature provides us concepts with which to better understand processes of institutional change in small town and rural water supply in Ghana. Specifically, we seek insight into the roles played by implementing actors in resisting or changing institutions and the institutional arrangements under the NCWSP.

Note

[1] In this study, institutional arrangements are the governance structures for water management, defined as the rules, practices and means used by water actors (state and community) in their daily operation and management of small town water supply systems. These rules, practices and means are interrelated.

3 Theoretical Framework: Institutional Analysis and Change

This chapter outlines the concepts that form the basis for the discussion of the cases examined in this research. First, I provide an overview of three major schools of institutional analysis (section 3.1). This is followed by a definition of institutions and categories of institutions (section 3.2), and a presentation of theory on how institutions change (section 3.3). Mechanisms that can help explain how institutional change takes shape are then addressed (section 3.4). Specifically, I look at translation, institutional bricolage and institutional entrepreneurship (section 3.5). I provide the conceptual framework for this thesis (section 3.6), which informs and guides the research questions and propositions. The chapter concludes with a summery on institutional change (section 3.7).

3.1 Approaches to institutional analysis

Institutional analysis is deeply rooted in economics, sociology and political science. It deals with how individuals and groups construct institutions, how institutions function in practice and the effects of institutions on individuals, on communities and on society at large. This thesis focuses on the second aspect: how institutions function in practice.

There are different approaches to institutional analysis. Thorstein Veblen, a foremost scholar of the evolutionary theory of institutions, focused on the role of the institution in real life economic processes. He criticized scholars who took institutions for granted in their analyses of human behaviour, and urged scholars to include institutions in analyses of economic and social behaviour (Chavance 2009: 11). Veblen (1899: 129) argued that institutions emerge from habits of thought, defined as an outcome of habits of life. Thought styles, according to Veblen, are a key factor in community organisation. A primary feature of institutions is their relative inertia,

influenced by history and past events (Veblen 1899 cited in Chavance 2009: 11).

Peters (2001) distinguished six schools of the "new institutionalism": rational choice, organisational, historical, normative, empirical and international. Each stresses the important role of institutions in social, economic and political activities. Although there are differences in definitions and in the relationship posited between actors and how institutions change, Peters acknowledged the lack of a clear distinction between these schools. I focus here on the first three.

The major schools of institutional analysis today are the rational choice (e.g., Brinton and Nee 1975, Knight and Sened 1998), the organisational (e.g., DiMaggio and Powell 1991) and the historical (e.g., Steinmo et al. 1992). The three have both differences and similarities in the way they define institutions, the way they perceive how institutions change, their favoured causal concepts for explaining how institutions change, their levels of analysis and their theories of actions and constraints in the change process (Hall and Taylor 1996).

Williamson (2000) and North (1990), and other scholars, perceive institutions as an important indicator in the analysis of economic activities. They argued that the market does not always produce efficient economic actions, due to the high cost of monitoring. Institutions facilitate and regulate economic behaviour, hence the need to incorporate institutions in analyses of economic behaviour. Rational choice institutionalism views institutions as comprising formal and informal rules and compliance procedures (North 1990: 3). Actors' capacity to make rational choices is said to be constrained by the availability of relevant information and cognitive capacity. Institutions once created become expensive to change. Positive feedback creates a particular process of actions which are then "locked in" by increasing returns. In other words, a particular way of doing things becomes increasingly attractive as more people invest in it. For this reason, changing old ways of doing things becomes less attractive and more expensive (Pierson 2000). Sociologists and political scientists writing from a rational choice perspective argue along similar lines as economists. Their main contribution to the rational choice paradigm is the "choice within constraints approach", which views institutions as limiting the range of choices that individuals can take in pursuit of their interests (e.g., Alt and Shepsle 1990, Nee 1998, Scharpf 1997). Other scholars argue that

individuals build and change institutions to achieve their interests (e.g., Kiser and Laing 2001, Knight 1992).

Much of the current literature representing the rational choice paradigm holds that change is evolutionary because it occurs through the path-dependent mechanism of positive feedback, with increasing returns and choice within constraints (Knight 1992, North 1998). Despite the advances made by rational choice institutionalism in understanding why change is evolutionary in nature, this school of thought has as yet failed to explain the mechanisms by which institutional change occurs (North 1998). Examining these mechanisms requires attention for other aspects of institutions (e.g., cognitive and normative aspects) that influence how actors perceive their interests and make choices (North 1990: 42-44, Knight and North 1997, Campbell 2004).

In organisational institutionalism, the focus is on the role of norms and values (informal institutions) in the analysis of institutions. The norms and values upheld in the surrounding environment influence the choices organisations make and the practices they employ to achieve their stated goals (March and Olsen 1989). John Meyer and Brian Rowan (1977: 340) insisted that "organisations respond to their environment to increase their legitimacy and survival prospects independent of the efficacy of adopted practices and procedure". Organisational institutionalism defines institutions in terms of an informal and common cultural milieu, symbolism, a taken-for-granted cognitive schema and a formal rule system. It is within these constraints that organisations craft institutions for their day-to-day interactions (Jepperson 1991: 145). These common frames take the form of routines and practices, which enable organisations to assume an isomorphic character. Motivation is informed not by instrumental logic but by a "logic of appropriateness". In other words, organisations do not focus on maximising benefits, but their activities should conform to culturally appropriate scripts, schema and norms in their immediate environment. According to Clement and Cook (1999), cognitive scripts and schema aid organisations in defining their problems and interests and in finding solutions, though this is often unconscious. These scripts both constrain and enable organisational actors in their daily interactions (Campbell 2004, Campbell and Pedersen 1996).

Organisational institutionalists perceive institutional change as punctuated equilibrium or a punctuated evolutionary pattern, and evolutionary. Change is evolutionary because of the presence of normative and

cognitive factors that constrain actors' capacity to engage in rapid institutional reform (Campbell 2004, Hall and Taylor 1996). A criticism of organisational institutionalism is that it focuses mostly on the constraints imposed by institutional structure, giving less attention to actors and agency. Secondly, within this school of thought the distinction between cognitive and normative ideas is blurred. Thirdly, it fails to account for the mechanisms by which cognitive and normative structure enable and empower actors (see, e.g., DiMaggio and Powell 1991, Hirsch and Lounsbury 1997, Hirsch 1997, Stinchcombe 1996, Campbell 1998).

Historical institutionalism emerged as a reaction to several streams of thought in the domain of political science. Historical institutionalism defines institutions as the formal and informal rules and processes that structure actors' behaviour (Steinmo and Thelen 1992: 2). The central assumption of this school of thought is that historical and institutional settings influence the political behaviour of actors. Furthermore, historical institutionalists reject the rational choice assumption that actors are motivated only by material self-interest. They argue that institutions provide the frame which directs actors' preferences, goals and the strategies they adopt (Steinmo and Thelen 1992). Feedback received through learning allows decision-makers to adjust policies on an incremental basis to suit their purposes (Pierson 2000). Compared to rational choice and organisational institutionalists, historical institutionalists are more balanced in their work. To explain human behaviour, for example, they use both a logic of appropriateness or value-based logic (Goldstein and Keohane 1993, Campbell 2004) and a logic of instrumentality or interest-based logic.

One criticism of historical institutionalism is that it pays little attention to how ideas facilitate rather than constrain action. How actors deliberately use underlying norms and values as a frame to manipulate policymaking and institutional change is not specified (Campbell 1998). Historical institutionalist take for granted the processes by which institutions change. That is, they fail to specify the working of actors and their agency. In short, they use path dependence loosely to explain the evolutionary nature of institutional change, without specifying the mechanisms involved (Campbell 1997, 2004).

From the foregoing conceptualisation of institutions, each of the three schools of thought can be said to have its own strengths and weaknesses. Nonetheless, the differences in their approaches to institutional analysis make it challenging to derive a meaningful theory of institutional change

(Steinmo and Thelen 1992). Notwithstanding the differences in approach, many authors have identified the need to combine the strengths of these different paradigms to bridge the theoretical gaps, as each is deemed to have unique perspectives that help explain how institutions change. The current study reiterates this call, and argues for interdisciplinary thinking and constructive engagement with all three schools of thought. I draw on the strengths of each school to advance our understanding of processes of institutional change (Hall and Taylor 1996, Campbell 2004, Scott and Meyer 1994).

The evidence presented above suggests that pre-existing institutions constrain actors' choices, making institutional change path dependent and evolutionary. Existing institutions and mechanisms of enforcement constrain actors' capacities to engage in revolutionary change, which is why change is usually path dependent and evolutionary (North 1990; Campbell and Pedersen 1996; Ostrom 1990, 1991: 10). The institutional change literature provides additional evidence in Charles E. Lindblom's (1959) writings on "the science of muddling through" in public policy. Although Lindblom's focus was not on institutional change, his characterisation of public policymaking as "muddling through" implies that people compete in the policy arena to satisfy their interests. Because actors compete to serve their own economic, political and social interests, the process of policy remains gradual and path dependent (Lindblom 1979).

Notwithstanding these constraints, I argue that institutions and mechanisms for enforcement provide means for actors to both resist and engage in change. I also maintain that what motivates actors to resist and engage in change is informed by economic, political, social and moral considerations. By extension, actors are motivated to resist and engage in change by considerations of economics, normative acceptance and cognitive appropriateness. Institutions, as read in this section, make change evolutionary and path dependent. It is therefore necessary to clarify what is meant by institutions, how they change, sources of institutional change and concepts used to explain the evolutionary nature of change.

3.2 Institutions

What are institutions? Scholars differ in their answers to this basic question. Some refer to institutions as "humanly devised constraints that shape human interactions" (North 1990: 3, Nelson and Winter 2009). For

Hodgson (2006: 2), institutions are "embedded social rules that structure social interactions and create stable expectations of behaviour… imposing forms and consistency in human activities". Others define institutions as "prescriptions that humans use to organise all forms of repetitive and structured interactions" (Ostrom 2005: 3).

To Campbell (2004: 1), "institutions are the foundation of life and consist of formal and informal rules, [practices], monitoring and enforcement mechanisms and systems of meaning that define the context within which individuals… and other organisations operate and interact with each other".

Scott (2001: 51-53) conceptualised institutions through three lenses: "regulative (constraining and regularising the behaviour and choices of agents); normative (prescribes appropriate actions and activities, e.g., values and norms); and, cultural-cognitive (they are shared beliefs that constitute the social reality and frames through which meaning is attributed to objects and activities)".

A common thread running through all of these definitions is the dual character of institutions. They both constrain and enable actors in their choices. Institutions are expressed through rules, social norms and cultural beliefs. Also, institutions provide the structure and resources that actors need to perform their roles and responsibilities.

Aside from the differences between the definitions of institutions, institutions are often misunderstood and mistaken for organisations. Although the two concepts do overlap (Uphoff 1989), there are differences. North (1990), for instance, described an organisation as players brought together by a common purpose to achieve an objective. They include political, economic and social bodies. Similarly, Cernea (1987: 15) defined organisations as "networks of behavioural roles arranged into hierarchies to elicit desired individual behaviour and co-ordinated actions by obeying [defined systems] of rules and procedures". Merrey (1996: 8) described organisations as "structures of recognised and accepted roles".

Taken together, this thesis arrives at a definition of institutions as consisting of formal and informal rules, resources, practices and monitoring and enforcement mechanisms (Uphoff 1989) which define the context within which individuals operate and interact with each other. Organisations, in contrast, are actors or agents brought together by a common purpose or higher order actors, such as state government, international actors

or local elites, to achieve a desired objective or outcome. The activities that enable those involved to achieve the desired goals are defined in terms of roles, responsibilities, institutional arrangements and everyday practices[1] (Merrey et al. 2007: 196).

3.2.1 Categorising institutions

While definitions of institutions differ between the various schools of thought, two major categories of institutions are held in common: formal and informal. Formal institutions are "written rules and procedures, which are expectations or actions required or forbidden, and enforced through third parties, such as courts, legislature, and bureaucracies" (Helmke and Levitsky 2004: 727). Informal institutions are "socially shared rules, usually unwritten, and communicated either orally or through symbolic representations" (Helmke and Levitsky 2004: 727). Examples of informal institutions include conventions, codes of behaviour and norms. This category of institutions is self-enforcing or self-policing, making it unnecessary for a third-party enforcer to ensure compliance (Brousseau et al. 2011).

Yet, this dichotomous categorisation often turns out to be ambiguous and complex, leading to outcomes that are contradictory and vague. It can be a challenge to apply the distinction meaningfully in institutional analysis (Cleaver 2002, Helmke and Levitsky 2004, Kingston and Caballero 2009). Helmke and Levitsky (2004) pointed out that the distinction between formal and informal institutions is not unequivocal. For example, many institutions within the state (bureaucratic norms and corruption) are informal, while the rules governing many non-state organisations, such as corporations and political parties, are widely considered formal. The categorisation of informal institutions as self-enforcing or enforced by the group fails to account for the fact that certain informal rules are externally enforced, for example, by clan and mafia bosses or even the state itself (e.g., in the case of organised state corruption) (Helmke and Levitsky 2004: 727).

Kingston and Caballero (2009) argued that some forms of informal rules have a direct influence on actors' preferences and choices regarding formal rules. For example, players' choices are influenced when a rule or practice is perceived as unfair. Also, in some cases, informality may imply that rules not written down can be changed through agreement.

The current study acknowledges the challenges, ambiguities and complexities surrounding the usage and interpretation of institutions as formal

or informal. The superficiality of this categorisation makes it challenging to apply in this thesis. In reality, they are two arms of institutions that coexist and are interrelated, overlapping with one another. Informal institutions are in part extensions of the interpretations given to formal institutions, and formal institutions depend on informal institutions for their sustainability and durability (Saleth and Dinar 2004). To avoid the challenges associated with the formal/informal distinction, I use a different categorisation of institutions that emphasises where the institutions originate.

Thus, state-led institutions are those that originate from the state. For this study, state-led institutions include international best practices and national government-initiated policies and programmes, normally backed by the legal and regulatory framework of the state. These institutions are exogenous to communities but provide guidance and direction to the state and affiliated organisations and implementing actors (Sokile et al. 2003). State-led institutions evolve through political processes, are centrally designed by the state government and are enforced by third parties. Enforcement mechanisms include regulatory frameworks, programmes, laws, policy guidelines, manuals, strategy documents, by laws and regulating organisations established in accordance with legal and regulatory frameworks, including the resources (financial and technical) that allow actors to perform their roles and responsibilities.

Community-led or community-embedded institutions[2] are my second category. These include rules, social norms, cultural beliefs and practices determined by localised customs and the tradition and culture of a community. They are codified (implied or explicit) and transmitted from generation to generation; they are self-enforcing and are internally generated or community initiated (Sokile et al. 2005). In this category are included the resources (human and social capital) which the communities rely on in their daily interactions. Here "community" implies people living in a specific social space within clearly specified boundaries and using common sources of water or facilities.

This study acknowledges the state-led and community-led categories of institution as two extremes on a continuum. As they can overlap, interlink and form hybrids, the distinction is purely analytic. What is important for this study is not the distinctive features of state, community or hybrid institutions. Rather, the current research seeks to understand how a category of institutions can facilitate or frustrate actors' capacity to implement

specific policies or programmes, for our purposes, institutional reform in small town and rural water supply in Ghana under the NCWSP.

3.3 Theories of institutional change

3.3.1 Collective action theories of change

Schools of thought differ on how institutions change. This study views institutional change as a force or process that stimulates actors to resist, renegotiate and modify institutions and institutional arrangements. Many authors treat institutional change as a centralised collective action process. Through combined political bodies, such as the state, community and organisations, institutions are constructed. Individuals bargain or engage in collective action to change rules for their own benefit or for the collective good of the group (Kingston and Caballero 2009: 155, Campbell 2004). To these, Helmsing (2013) added multilateral and bilateral organisations, aid donors and civil society organisations in developing countries as influential actors in directing processes of institutional change.

In her studies of governing the commons, Ostrom (1990) maintained that for policymakers to overcome problems of collective action they must address free-riding, solve commitment problems, arrange for the supply of new institutions and monitor individual compliance with sets of rules. She also maintained that groups that are able to organise and govern their behaviour successfully are marked by the following design principles: (i) clearly defined boundaries; (ii) rules that are well matched to local needs and conditions; (iii) implementing actors' participation in rules formation; (iv) a monitoring system in place; and (v) a graduated system of sanctions with low cost conflict resolution mechanisms.

Notwithstanding the capacity of actors to successfully govern their behaviours, Ostrom (2005) presented a three-level hierarchy of rules that influence actors' behaviours and the outcomes of these. The first is operational choice rules, which guide daily procedures and can change relatively quickly. The second is collective choice rules, which change at a slower pace and structure the direction of operations and the practices of participants. (iii) Constitutional choice rules are the third level. These establish collective choice processes and determine who may take part; and are least amenable to change.

Drawing on the foregoing, we suggest that institutions are interdependent and hierarchical, with change at one level of an institution setting the

pace for changes at other levels. Because of the interdependence of institutions, change is often gradual and path dependent, as opposed to rapid and revolutionary.

3.3.2 Evolutionary institutional change

A large and growing body of literature treats institutional change as an evolutionary process. Within this process, new rules and institutional arrangements emerge through a process of decentralised selection involving learning, imitation and experimentation. Through competition, unsuccessful institutions fall by the wayside while successful institutions spread and replicate (Kingston and Caballero 2009).

The concept of institutional evolution borrows core Darwinist principles of variation, retention and selection. A number of authors claim that these evolutionary terms can help us to understand the cultural, political and economic dynamics in any institutional change process (e.g., Campbell 1965, Tilly and Ardant 1975, Hayek 1983, Nelson and Winter 2002 cited in Blyth et al. 2011).

Variation, for example, offers an understanding of how institutions change in an incremental way. Existing environmental factors, such as availability of information and resources, give some actors advantages over others, affecting actors' abilities to resist and engage in institutional change. Although actors are replete with social norms, rules and behaviour, their ability or tendency to cooperate hinges on their cognitive capacities to change or sustain the institutions in use (Kingston and Caballero 2009: 160).

Institutional evolutionists maintain that adaptation is an important aspect of the evolutionary process of institutional change. Gould (1989), for example, argued that major changes in history resulted from the cumulative effect of many small adaptations. On the other hand, big changes can result from massive environmental shocks that lead to punctuated equilibrium (Blyth et al. 2011: 309). In other words, historical events direct the path, choices and selection of rules and actions (Kingston and Caballero 2009).

The central assumptions of evolutionary institutional change reflect social, cultural and economic factors. Institutional change is said to stem mainly from human nature. A key contribution in this regard is Veblen's "habits of thought" (Chavance 2009). Habits, according to Veblen, are

durable mechanisms that sustain institutions and drive individuals to make decisions and act in particular ways. Moreover, actors' bounded rationality stimulates them to fall back on habits. Habits, therefore, make it easier for actors to interpret and understand a complex environment (Hodgson 2004, Kingston and Caballero 2009). The concept of habit has been criticised for its inability to explain actors' choices and preferences (Hodgson 2006, 2004). The current study views habits as an important determining factor in influencing change. Thus, I look at how the habits of actors provide a basis for their behaviour, beyond rational motivations.

Lately, social theorists have given more attention to the role of power as a force driving and shaping institutional change. Mahoney and Thelen (2010), for example, argued that disparities in resources enable some actors to be more capable and have more bargaining power than others. These powerful actors dominate institutional change processes, coherently affecting the type of institutional change that emerges. Others have argued that institutional change does not always reflect the preferences of the powerful actors, but are a result of spill-overs or compromises among the actors coordinating the implementation of institutional change (Mahoney and Thelen 2010).

Shedding more light on the above, the operation of institutions occasionally directs and generates pressure for change. This may happen, for example, when distributional inequalities create rivalry among power-holders, which exerts change pressure (Mahoney and Thelen 2010). Hollingsworth and Boyer (1997: 3) argued that institutional arrangements are always diverse, because differences in actors' interests and power affect their choices and preferences. The notion of power, in addition to agency and socio-cultural norms, helps us to understand why some actors have so much influence in the creation of new institutions (Knight and North 1997, Chang 2002).

Helmsing (2013) argued that change can be driven by variation in the distribution of resources, such as finances, knowledge and power, and that existing institutions influence the strategies that actors adopt to promote their own interests or to block change. Furthermore, existing institutional structures can confer authoritative resources to one group, to the disadvantage of others because of the asymmetry of resources. Institutional change then becomes a struggle between groups, with each imposing its own interests through the formation of "coalitions". Sustaining institutions, according to Helmsing (2013), then necessitates institutional change,

which is reliant on the following: (i) the existence of competing institutions to enable choices and flexibility of the institutions in question to enable change; (ii) capacity and role of the state to enforce rules; and (iii) ability to compensate losers to prevent them from blocking change.

With regard to new rules, Gómez (2008) elaborated on four governance issues that are key to the sustainability of institutions: (i) input legitimacy and level of acceptability of rules among implementers; (ii) capacity to enforce and ensure compliance with rules; (iii) capacity of rules to solve a social dilemma; and (iv) the switching cost associated with new rules.

From the writings of these scholars, we can affirm that institutions change as a result of a confrontation between actors promoting new rules and others favouring the status quo. The extent to which change is likely depends on the costs and benefits of the proposed change (Kingston and Caballero 2009: 156). However, there are scholars who argue that economic benefit alone cannot motivate actors to initiate change. For example, Gómez (2008) argued that actors' moral values, worldviews and identities drive institutional change. I argue that diverse factors drive change while acknowledging that these factors are difficult to establish on the surface. As some scholars have argued that change is exogenous, while others have focused on endogenous factors, I argue that what drives change is both exogenous and endogenous. Nevertheless, these factors on their own are not sufficient to clearly understand actors' motivations for engaging in change. I argue that actors' motivations and logic must be examined to determine why they might strive to change, maintain and sustain institutions. These motivational factors arise from economic benefits, political interests, moral values and the identities and worldviews of actors (Campbell 2004, Gómez 2008, March and Olsen 2006).

The institutional change literature is replete with empirical evidence on how institutions change in an incremental (evolutionary) manner and when change is radical (revolutionary). Following Helmsing (2013), I view institutional change as not strictly a spontaneous or deliberate process, but rather a combination of both. The existing environmental conditions reflected in policies, laws, social norms, cultural beliefs, customs and actors' motivations make institutional change path dependent and evolutionary. Most institutionalists use path dependence to explain why institutional change is evolutionary in nature. This thesis follows that tradition, acknowledging the importance of history and existing institutions in

rendering change path dependent and evolutionary. First, change becomes path dependent due to lock-in effects and the high cost involved in changing institutions, which stimulates actors to persist in their old ways of doing things. Secondly, lack of information constrains actors' capacity to engage in new innovative and transformational activities. Notwithstanding earlier contributions, few studies have accounted for the processes by which change does emerge, so as to enable us to understand patterns of institutional change. In an effort to close this gap, I look at the way path dependence has been used to explain the evolutionary nature of institutional change. I then proceed to investigate the mechanisms or processes by which institutional change occurs in an evolutionary fashion.

3.3.3 Path dependence in processes of change

Several studies have conceptualised institutional change as a path-dependent process (Martin and Sunley 2006, Hall and Taylor 1996, Thelen 1999, Pierson 2000). The main argument put forward is that historical and environmental factors play a crucial role in the day-to-day interactions and relationships among economic, social and political actors, hence making institutional change a function of what exists or has gone before. Path dependence is based on three concepts: self-reinforcing mechanisms, switching costs and critical junctures. The first two concepts explain the continuity of institutions and the difficulty of institutional change. In other words, they help explain how institutions, and networks of institutions, take shape through self-reinforcing mechanisms and as a result become difficult to change. The third concept, drawn from political science, proposes that there are key moments at which radical reforms may occur (Prado and Trebilcock 2009, Martin and Sunley 2006).

Advancing this line of inquiry, Martin and Sunley (2006) used three related concepts: "technological lock-in" (associated with Paul David), "increasing returns" (coined by Brian Arthur) and "institutional hysteresis" (advanced by Douglas North and Mark Setterfield), to explain why institutions and institutional arrangements occur in a path-dependent manner (Martin and Sunley 2006: 399). They argued that "positive feedback" locks in a particular process of actions, because of increasing returns. In other words, the benefits of doing things in a particular way increase, rather than decrease, over time as more and more people invest in

that way of doing things. As a result, changing an old way of doing things becomes less and less attractive (Pierson 2000).

Further studies by North (2005) point to three main levels of path dependence in institutional change: the individual level, the institutional level and the social level. At the individual level, North (2005) argued that past institutional structures reflect a set of beliefs and practices, which makes institutional change path dependant either because the proposed changes run counter to existing practices or because they threaten existing organisational leaders and entrepreneurs (North 2005, Prado and Trebilcock 2009: 354).

At the institutional level, institutional change becomes counter-productive if interrelated and interconnected institutions are ignored.

At the social level, North (2005) maintained that formal and informal institutions, and their enforcement mechanisms, are critical for the performance of any institution. He also argued that while formal institutions can easily change through political and state interventions, informal institutions are difficult to change in the short run, as their enforcement characteristics are only imperfectly subject to deliberate control. The literature further reveals that interactions between formal and informal institutions help to explain why institutional changes are often path dependent and why they sometimes fail to produce the intended outcomes (Prado and Trebilcock 2009).

This thesis recognises the concepts of self-reinforcement mechanism, lock-in effects and increasing returns (Martin and Sunley 2006, Hall and Taylor 1996, Thelen 1999, Pierson 2000), alongside the interconnections between formal and informal institutions (North 2005), as providing a good starting point for investigating the evolutionary nature of change. Some scholars, however, use self-reinforcement mechanisms, increasing returns and positive feedback to explain institutional resilience, rather than institutional change. As observed in a number of studies, path dependence yields two opposing ideas. First, the legacies of the past affect actors' choices and constrain their ability to allow new institutional change. Second, the lock-in effect explains resistance to change, rather than how change processes evolve. This deterministic reading of the concept blurs the processes or mechanisms by which path dependence is involved in institutional change (Pierson 2000, Prado and Trebilcock 2009).

Most institutionalists have used path dependence to explain why institutional change is evolutionary in nature. They acknowledge the importance of history and the constraining aspect of pre-existing institutions in directing the path of institutional change. Thus, pre-existing institutions, such as state policies and actions, power relations and cultural factors, are said to constrain actors' choices and preferences, rendering change evolutionary and path dependent (Campbell 1997, 2004). Kingston and Caballero (2007) argued that institutional inertia is closely related to history and the presence of pre-exiting institutions, which influence the configuration of actors' interests and the bargaining power they can muster to block implementation of institutional change.

In the current study, I similarly acknowledge that the processes involved in embarking on institutional change are constrained by pre-existing institutional arrangements, specifically institutions, power relations, state actions and cultural factors. This, again, makes the outcome of such change more evolutionary and path dependent. Nevertheless, the processes by which actors determine their choices and preferences remain ill-defined in most of the institutional change literature (Campbell 1997, 2004). It important to note that few evolutionary institutionalists acknowledge actor agency. For instance, Garaud and Karnoe (2001) in their studies, revealed that actors not only reacted to external shocks or actions (e.g., national policy), but also initiated changes in the direction of institutional development. Nevertheless, most evolutionary institutionalists, for example, those who rely on the constraining aspects of institutions to explain change, have failed to establish how actors define their problems and interests, and how they develop their ideas about alternative institutional arrangements. These, according to Campbell, (2004) are "analytical black boxes", concealing important mechanisms underlying evolutionary institutional change.

Failure to consider the mechanisms or processes of institutional change prevents us from factoring in the effect of agency in explaining institutional change. The current study suggests that if the processes or mechanisms of institutional change are ignored, institutionalists may end up substituting their own assumptions and interpretations of actors' interests for those that actually motivate actors' behaviour. This can be considered a major weakness in the work of institutionalists thus far (Campbell 1997, 2004: 62; Bendor et al. 2001: 188; DiMaggio 1988: 10; Skocpol 1984: 17). To address the gap, this thesis seeks to specify the mechanisms or

processes that account for institutional change in order to advance convincing theories and empirical arguments to explain change. To contribute to this growing area of research, I specifically explore the processes and factors that drove institutions to change in my six study cases.

3.4 Mechanisms explaining institutional change

As noted earlier, actors respond to an exogenous shock by engaging in change only if the benefit of implementing that change outweighs the cost. Nonetheless, the presence of pre-existing institutions and enforcement mechanisms constrains actors from making a radical change.

According to Kingston and Caballero (2009), choices are constrained both by actors' inability to access complete information about their environment and by the strategies actors adopt.

The constraints-based explanation of institutional change encourages us to concentrate on exogenous factors, with less focus on endogenous factors and actor agency. Actors respond to change pressure exerted by exogenous factors such as technological developments, economic conditions, shifts in state policies and power struggles. Actors may seek to alleviate such pressures by modifying institutional arrangements through, for example, bargaining, trial and error, negotiation and other strategies. Most of these explanations of institutional change focus on structural aspects, with less attention given to agential factors employed by those involved to facilitate and resist institutional change (e.g., Acemoglu et al. 2003, Sebudubudu and Molutsi 2009, Leftwich 2010b: 94).

Recent years have witnessed a growth in the institutionalist literature focusing on actors and their agency. The emphasis of these writings tends to be the "autonomy of agents [and] their choices", with innovation proposed as the rightful focus in explaining institutional change (Leftwich 2010a: 94).

Factoring actor agency into the analysis of institutions allows us to investigate how actors define their problems and interests, and how they develop the ideas that inform the choices they make between alternative institutional arrangements. This is important if we are to understand what mechanisms or processes underlie institutional change (e.g., North 1990, Campbell and Lindberg 1990).

Scholars from the fields of organisational sociology and political science have made theoretical and empirical advances in understanding the mechanisms and processes that enable institutions to change (DiMaggio and Powell 1991, Scott and Meyer 1994, Steinmo and Thelen 1992). In line with their work (e.g., Hodgson 2005), I too argue for study of aspects that enable institutions to evolve. Particularly, I maintain that institutions provide actors with the scripts and interpretative frames they use to respond to pressure for change. Existing institutions provide the social scripts by which actors define their interests and problems and create solutions that lead to evolutionary institutional change (March and Olsen 1983; Jepperson 1991: 46; Campbell 1997, 2004). The outcomes of institutional change processes are incremental and path dependent because actors can only work with the institutions that are available and known to them and considered appropriate and acceptable. Consistent with Campbell (1997, 2004), I propose that we open the black box concealing mechanisms underlying evolutionary institutional change. To do this, I first observe how actors define their problems and interests and how they develop strategies towards possible alternative institutional arrangements. Secondly, my analysis considers endogenous institutions. Following this approach minimises the risk of substituting assumptions and interpretations of actors' interests for those that actually motivate actors' behaviour.

3.5 Explaining processes of institutional change: Translation, bricolage and institutional entrepreneurship

This thesis employs translation, bricolage and institutional entrepreneurship to account for the mechanisms and processes underlying the evolutionary nature of institutional change. All three concepts provide an explanation for the enabling and constraining aspects of institutions in processes of change. With them, we are thus able to account for the processes through which a specific policy is implemented in actual practice.

Translation is a concept that leaves behind the assumption of the rationality of actors, though focusing on actors as the main drivers of policy change. As shown in much of the policy implementation literature, the local social and institutional context influences actors' capacity to translate and implement central government policies. I use the concept of translation to explore how existing institutional factors influence actors' capacity

to engage in one form of practices rather than other practices when confronted with similar challenges.

Institutional bricolage emphasises both the constraints and agency of actors in finding solutions to challenges (Cleaver 2012, 2001; Douglas 1987; Campbell 2004, 1997). Although actors are constrained by the local social and institutional context (social structure), they find opportunities to innovate within those constraints.

The scholarship on institutional entrepreneurs allows us to focus on the involved actors and the resources they employ to resist or promote institutional change. It also helps us to understand actors' choices and preferences, such as why they might engage in certain practices in one setting and in other practices in another context (Beckert 1999, 2003; Kingdon 2002; Schneider and Teske 1992; Sheingate 2003; Helmsing 2016).

3.5.1 Translation

Policy "transfer" is the conventional idea for explaining how policy travels from one place to another (Dolowitz and Marsh 1996). Over the years, scholars of organisational studies have adopted the concept of "translation" to refine understanding of how policies travel. Both concepts are similar, as they describe the interpretation given to policies when they come into contact with recipients for implementation (Czarniawska and Sevón 1996). The difference is mainly one of emphasis. "Translation implies that actors modify innovations to fit their unique needs in time and space" (Whittle et al. 2010: 20). Freeman (2007: 429-430), however, maintained that translation means transfer. His point is that policy, practice and research move through a chain of processes, from formulation and interpretation of ideas to operationalisation and implementation.

"Translation", according to Campbell (2004), is similar to "bricolage" (see section 3.5.2) in that both involve innovation through a recombination of institutional elements to solve a problem. While "bricolage is recombination of old locally given [elements], translation... involves combination of new externally given elements received through diffusion as well as old locally given ones inherited from the past" (Campbell 2004: 80). The thrust of this argument is that the local social and institutional context affects the degree of change that is likely to occur. Context, according to

Campbell (2004), influences actors' interpretation and implementation of new policies and practices.

Although policy travel, transfer, diffusion and translation have similarities, there are important differences between them. Freeman (2009) emphasised that translation carries more analytical power, as it illuminates or makes explicit the distinctions between policy ideas and practices.

Mukhtarov (2014: 78) provided four major differences between policy transfer and translation: (i) Policy transfer is limited to government, while policy translation includes all actors involved in policymaking and implementation. (ii) The more complex the policy ideas, the less probability of it being transferred in policy, with contextual factors affecting the capacity of actors to implement policy. (iii) Policy transfer happens in a linear and prescriptive way, while in translation, no guidelines are available and the process is highly contingent on many factors. (iv) Policy transfer is constrained by the path dependence of policies or factors exogenous to implementers, while in translation, constraints are socially constructed within the context of the application; in other words, both exogenous and endogenous factors constrain implementation in policy translation. (v) Policy transfer seeks a "best fit" between polices and context, while translation looks to get the "unfit to fit", constructing solution to the challenges encountered (Mukhtarov 2014: 78).

A key criticism of the conventional approach of policy transfer is its assumption of the perfect rationality of actors. Actors or implementers are thought to diffuse and enact policies irrespective of their position or situation. In other words, actors' social, political and cognitive capacities to influence or constrain policy implementation is taken for granted.

Both concepts are acknowledged as largely bypassing the social construction of problems, in favour of a positivist ideological view (Dolowitz and Marsh 1996, 2000). Dolowitz and Marsh (1996) affirmed the view that because actors are rationally bounded, they are unable to understand their environment. As a result, they base their decisions on mistaken and unclear information about the new policy ideas (Dolowitz and Marsh 1996: 16). These same authors argued that conventional scholarship on policy travel pays insufficient attention to the multiplicity of actors and the effect of this multiplicity on how ideas and policies are interpreted.

The notion of politics of scale has similarly received little attention in the policy transfer literature (see also Marston 2000). The interrelationship

between the global, national and local is an important indicator for understanding policy enactment and implementation (Lendvai, Noémi and Stubbs 2007, 2009). Whittle et al. (2010) identified notable differences between diffusion and translation. The former is said to rest on the assumption that actors are not influenced by the local environment and that innovation remains constant, whereas "translation implies that actors modify innovations to 'fit their unique needs in time and space' and are themselves transformed in the process" (Whittle et al. 2010: 19).

Lendvai and Stubbs (2007, 2009) listed three characteristics of the translation process. First, it is dynamic and complex, involving multiple actors. Second, the process of translation is continuous, which allows actors to transfer their knowledge and the effects of power. In short, the focus of translation is on representation, power and history (Lendvai, Noémi and Stubbs 2007, 2009). Clark (2008) described translation as shedding light on three aspects of policy and practice: (i) it illuminates processes of policy translation and transfer; (ii) it explains implementation by showing how policy ideas travel to "frontline practices"; and (iii) it throws light on the work of actors who mediate between language, context and practice.

Despite the analytical strength of translation in explaining processes of change, the logic of action which informs actors' interpretations and understandings is not outside the influence of their immediate environment. Several studies identify factors likely to influence or constrain the translation process and consequently the final outcome. Dolowitz and Marsh (1996) named three of these as (i) insufficient information about a policy or programme; (ii) availability of institutional capacity, resources, finances and information on structures; and (iii) actors' economic, social and political ideologies.

For Campbell (2004), the translation process is constrained by (i) the local social and institutional context and the political support provided by national actors; (ii) organisational characteristics and the extent to which leaders within organisations are committed to implementation of new ideas and principles; (iii) the availability of implementing resources in terms of financial, administrative and other needed capacities and skills; and (iv) power struggle.

Rose (1993) proposed a number of hypothesises regarding constraints on translation: (i) Programmes with a single goal are more likely to succeed than those with multiple goals. (ii) Programmes that relate problems to

solutions are more likely to succeed than those in which the relationship is more blurred, with policies that compromise and threaten the power and legitimacy of other implementing actors less likely to be successfully translated. (iii) The more information the implementing actors have, the greater the likelihood that policies will be translated more substantially than symbolically. (iv) When technological innovations are less complex, there are fewer ambiguities in policies, and programme translation is smoother (Rose 1993).

It is important to emphasise that the translation process influences actors' institutional logic of action. The logic of action entails the motivations and calculus that direct actors' choices and practices. For instance, economic or political self-interest may influence actors' choices. In some circumstances, actors' cognitive understanding and discourses on how things ought to be organised influence their choices and actions (Campbell 2004: 84).

Despite much new knowledge about translation, the focus of the current work is not on the semantic debate about what translation stands for. In this study, I view translation as the vertical transfer of national policies to communities and the way recipients' local social and institutional context shapes their interpretation and implementation of national policies. In this thesis, translation connotes the interpretation given to national policies, ideas, principles and practices and how these interpretations influence implementation. Factors that affect and inform actors' choices and practices and the logic underlying their actions are considered part of the process of translation.

Translation is used to shed light on the processes by which policies are enacted and implemented in actual practice. Actors' practices are recognised as being influenced by the surrounding environment and the logic behind actors' choices and practices. March and Olsen (1996, 2006) confirmed such a logic of action as informing actors' behaviour. The translation literature further allows us to understand how actors operationalise new ideas either for themselves or for others (March and Olsen 1996, 2006). In addition, the concept of translation directs our explicit attention to all actors involved in implementing policy ideas. This helps us to reflect on what enables or constrains an actor's agency and the motivations behind the choices and practices they adopt.

3.5.2 Bricolage

The term bricolage or institutional bricolage has been applied to explain the dichotomous characteristic of institutions (both enabling and constraining) as well as their tendency to change gradually from within. Anthropologist Levi Strauss (1966) coined the term intellectual bricolage, which Douglas (1987) expanded on to explain the constraining and enabling aspects of institutions. Giddens (1984), Long (2003) and Douglas (1987) drew on the concept to explain the relationship between agency and structure. Giddens (1984) perceived structure and agency as interdependent; therefore, cautioning us not to place one concept higher than the other. His structuration theory emphasises the duality of institutions in enabling and constraining actions. Agency is understood as allowing individuals to interact with their environment in creative ways, although they are also constrained by their surroundings.

Cleaver (2002) used "institutional bricolage" to explain how institutions develop and function, defining bricolage as "a process in which people consciously and non-consciously draw on existing social formulae… to 'patch' or 'piece together' institutions in response to changing situations" (Cleaver 2012: 37). Important aspects of the process of bricolage are that (i) it responds to everyday practices through improvisation and innovation; (ii) it relies on different attributes such as power, identity, existing customs and cultural practices; and (iii) it uses a similar arrangement for multiple purposes and tasks (Cleaver 2002, 2012). In addition, organisational arrangements invented or borrowed from existing institutions must conform to routines or habitual ways of doing things. In other words, the pieced together or adopted multifunctional institutional arrangements must be familiar and fit with the accepted logic of practices and social relations. This gives the new institutions legitimacy and acceptance and facilitates the exercise of authority (Cleaver 2012, 2002).

An important part of the process of bricolage is its dependence on the bricoleurs' hold on an authoritative resource, such as economic (e.g., wealth), personal characteristics (e.g., knowledge, power, creativity, eloquence) and influence (Cleaver 2012, 2002).

Cleaver identified three ways by which institutional bricolage takes shape: (i) aggregation, defined as recombination of existing institutions or socio-cultural institutions with newly introduced institutions; (ii) alteration, defined as improvising ad hoc new institutional arrangements by

borrowing from both institutions to fit into a specific context; and (iii) articulation, defined as asserting identities and cultural values to resist imposed institutional design. Norms, customs, traditions and beliefs play many roles in the bricolage process (Cleaver 2012, 2001, 2002; Cleaver, Dalton and De Koning 2015).

Campbell (2004) defined bricolage as an innovative process in which actors construct new institutional solutions by combining elements in their repertoire. The process yields new institutions that differ from but resemble old ones (Campbell 2004: 69). Campbell distinguished two types of bricolage: substantive and symbolic. Substantive bricolage "involves the re-combination of already existing institutional principles and practices to address [challenges] and follows the logic of instrumentality" (Campbell 2004: 67-70). Symbolic bricolage involves recombination of symbolic principles and practices consistent with the dominant normative and cognitive principles existing within a social environment. This follows a logic of appropriateness whereby the recombined elements must be acceptable and legitimate. Generally, bricolage is conceived as an active process in which actors make and patch together different institutional elements.

Overall, the outcome and process of bricolage are not made clear in either Campbell's or Cleaver's definition, although Campbell comes close with the differentiation between substantive and symbolic bricolage. Cleaver's conceptualisation of bricolage does not specify the translation process that bricoleurs go through to finalise their actions. In addition, the relationship between the outcome of implementation and the desired outcomes, and the logic behind actors' activities remain unclear. In contrast, Cleaver (2002, 2012) observed bricolage in action in natural resources management through the everyday practices of the bricoleurs. Cleaver also provided a clear view of the processes by which bricoleurs combine different institutions and practices to make changes when the need arises and the outcomes of their activities.

Although Campbell (2004) provided an example of the process of bricolage, unlike Cleaver he used bricolage at a higher national level, paying less attention to local level policy application. Campbell's study did not move beyond demonstrating the logic of action that informs the type of bricolage that emerges. He argued that it is difficult to understand the process without a long timeframe to study actors. To understand the processes and dynamics of institutional change, he advocated that research focus on the everyday practices of actors. This thesis takes up that call. By

observing the everyday practices of actors it traces the processes of bricolage found in implementation of the NCWSP.

Many studies in natural resources management use the concept of bricolage to understand how change occurs. Sehring (2009) applied institutional bricolage to understand water governance in post-Soviet Kyrgyzstan and Tajikistan. She found that the institutional design of water user associations, land distribution and enforcement of irrigation service fee collection was transformed through selective adoption of rules, laws, regulations and informal practices that fit and were compatible with the existing environment. Komakech et al. (2012) used the concept to investigate why state-led water allocation and management in the Hingilili catchment area of Tanzania did not achieve the goal of equitable and sustainable management. In this case, good social relations between highland and lowland neighbours provided the means for resolving conflict between farmers in the different localities (Komakech et al. 2012).

Overall, evidence does seem to link bricolage with actor creativity in making decisions. Bricolage is useful for understanding how actors use the institutions within their repertoire to help define their preferences and choices. Furthermore, bricolage can help us to understand the influence of authoritative and allocative resources on actors' final choices and the consequences of their actions. Nonetheless, the bricolage concept does not explicitly demonstrate the processes involved unless we engage in long-term study. Campbell (2004), for example, suggested that the social organisation and institutional location of actors explains differences in practices. Nonetheless, the following important questions remain unanswered: Why do actors make one form of bricolage rather than another, while being constrained by structures in the local context? How do they blend ideas from different places? What conditions trigger actors to use their agency? How does control over resources and institutions enable or constrain actors' capacity to initiate or enforce change (Leftwich 2010: 94)?

Campbell (2004) advocated observation of the everyday practices of actors to understand the processes involved. Similarly, Cleaver (2002, 2012) demonstrated that a key characteristic of the institutional bricolage process is that it is a response to everyday practices. Cleaver's types of bricolage processes (adaptation, aggregation and articulation) come close to exposing processes of bricolage by looking at the outcomes. The main questions left out in Cleaver's explanation of the bricolage process are

what informs actors' choices and why do actors adopt a particular type of bricolage. This renders the concept more descriptive, making its application challenging.

The current study defines bricolage as a process of innovation in which actors employ existing local institutions to enable a specific or given policy to work. This process occurs at the interface of resistance against, enforcement of and finding solutions to challenges faced in implementing new policy ideas and technological innovations. The outcome of bricolage is to fulfil the interests of particular actors or to ensure the collective good. The process of bricolage relies on specific agents that push it forward. I identify these actors as institutional entrepreneurs; they use institutions and available resources to engage in institutional change.

3.5.3 Institutional entrepreneurs: Who are they and what do they do?

In recent years, the notion of institutional entrepreneurship has received increasing attention from scholars interested in accounting for both institutional and policy change (Galanti and Capano 2015, Galanti 2018, Greenwood and Suddaby 2006, Jensen and Fersch 2016, Koene and Ansari 2013). Institutional entrepreneurship allows us to account for actor agency. The entrepreneurship literature views institutional change as endogenously created when actors known as institutional entrepreneurs use their resources to realise their interests or to resolve challenges (Galanti 2018). Explicit treatment of institutional entrepreneurs' innovation and agency allows us to better understand processes of institutional change (Sheingate 2003). A focus on actors and agential capability enables us to provide an account of the processes by which institutions and institutional arrangements develop, change, resist and are sustained.

Notwithstanding the above, the concept of institutional entrepreneurs has generated a number of controversies, as many terms have been used to describe the same people. This has rendered the term rather vague, disputed and meaningless (Weik 2011: 466). Terms such as political, bureaucratic, policy and institutional entrepreneurs continue to be used across various discipline to refer to actors who bring about needed changes or negotiate new institutional arrangements that fit within an existing context (Beckert 1999, Weik 2011). In political science the focus is on individuals who are "creative, resourceful, and opportunistic leaders whose skilful

manipulation of politics somehow results in the creation of… new institution[s]… and [has] transformative effects on policies" (Sheingate 2003: 188). Sheingate (2003) described such actors as political entrepreneurs. Likewise, Dahl (1961) used the term "political entrepreneur" to describe cunning and resourceful political leaders whose activities are fundamental to the process of political change.

From a policy perspective, policy entrepreneurs have been described as "single (or groups of) individuals or organizations who are willing to invest their resources... to promote a position in return for anticipated future gain" (Kingdon 2002: 179). Policy entrepreneurs are able to do this by changing the established ways of doing things (Mintrom and Norman 2009). Policy entrepreneurs focus on selling their ideas by defining a problem and introducing innovation aimed at problem solving (Mintrom and Norman 2009: 649-650, Kingdon 2002, Ackrill and Kay 2011). They use their access to resources, such as political connections, negotiating skills, technical expertise, finances and credibility, to facilitate or create new institutions (Kingdon 2002, Mintrom and Norman 2009). Mintrom and Norman (2009), for example, summarised four characteristics of policy entrepreneurship as follows: (i) displaying social acuity, that is, understanding others and engaging in policy conversations; (ii) defining problems and finding strategies to resolve the problems; (iii) forging coalitions and relying on external and internal resources to find strategies to resolve the challenges; and (iv) demonstrating that the new strategies will work or have worked in another place. Other studies have shown that policy entrepreneurs are most likely to deliver results when the new strategies are consistent with the local social and institutional context of the implementers (Bakir 2009). In other words, while the existing context constrains actors' capacity to make changes, existing institutions provide the means that enable actors' agency.

Despite the differences, these perceptions of entrepreneurship all involve the use of resources to promote innovation or resolve a problem, hoping for future gain (Galanti 2018). From the definitions provided, the current research identifies two categories of entrepreneurs: policy entrepreneurs (similar to the descriptions of entrepreneurs by Kingdon 2002 and Mintrom and Norman 2009) and political entrepreneurs (similar to Dahl 1961 and Sheingate 2003). These views of entrepreneurs best capture the nuances of what actors do to resist, change or facilitate institutional

change given their roles and responsibilities within their communities or organisations.

Institutional entrepreneurship thus highlights the roles of actors and their capacity to influence and transform institutional contexts. Institutional entrepreneurship refers to the "activities of actors who have an interest in particular institutional arrangements and... sufficient resources, social and political skills, and the social position necessary to initiate and create new institutions or to transform existing ones" (Maguire et al. 2004: 657, DiMaggio 1988, Wahid and Sein 2013).

I refer to institutional entrepreneurs as individuals or organisations who (i) are reactive and respond to challenges or engage in practices that resonate with their interests and values; (ii) use various strategies or practices to respond to the challenges; and (iii) have social and political skills and connections to networks, finances and expert knowledge which they use to create, facilitate or transform existing institutions. Institutional entrepreneurs recombine the elements within their repertoire in a creative process of bricolage to form new institutional arrangements. This allows them to solve specific challenges, to enforce new policy ideas or to resist new institutional change.

3.5.4 Characteristics of institutional entrepreneurs

Despite the growing literature on institutional entrepreneurs, scholars have yet to agree on a set of characteristics of these actors. Following DiMaggio (1988: 14-15), I identify the key characteristic of institutional entrepreneurs as their ability to see an opportunity and commit available resources to change, resist or facilitate institutional change.

The majority of scholars perceives institutional entrepreneurs as change agents that support the creation of institutions which are appropriate to and aligned with their interests (Dacin et al. 2002: 47) and act strategically to bring change (Jensen and Fersch 2016, Weik 2011). They do this by reconfiguring "an organisation's roles, responsibilities, structures, outputs, processes, systems, technology or other resources" (Buchanan and Badham 1999: 610). This scholarship links institutions and agency (Battilana 2006, Battilana et al. 2009, DiMaggio 1988). In other words, entrepreneurs find solutions to challenges by engaging in change. As change agents, they mobilise the resources necessary to effectuate the changes they seek (Jensen and Fersch 2016). They do so through the

acquisition of power (Klein et al. 2010), as well as by motivating others to join them through what Fligstein (2001) described as social skills.

Resources in this thesis are defined as the "structured properties of social systems drawn upon and reproduced by knowledgeable agents in the course of interaction" (Giddens 1984: 15). Following Giddens, I identify two types of resources: authoritative and allocative. Authoritative resources are command over people and over decision-making processes, as well as strategies such as policies and institutional arrangements (Giddens 1984: 15). They also include access to information, knowledge, power and influence over a social network, human capacities, institutional factors and the position of the potential entrepreneur (Campbell 2004; Cleaver 2002, 2012). Allocative resources describe the distribution of natural and physical resources, actors' command over these resources, and the technology and infrastructure in use.

For Campbell (2004), institutional entrepreneurs' ability to achieve their objectives depends on three interrelated factors: (i) mobilisation of supporters through forging new inter-actor relationships to achieve collective action; (ii) mobilising the needed resources in the form of finances, information and knowledge; and (iii) the social and institutional positions of prospective entrepreneurs and commitment of the entrepreneurs. These factors, according to Campbell (2004), are important in explaining why one form of entrepreneurship emerges instead of another. They are sources of power that stimulate actors' creativity and innovation in the process of institutional change.

Expanding on this idea, Cleaver (2002, 2012) maintained that bricoleurs' or institutional entrepreneurs' capacity to engage in change depends on their access to resources. Resources are a source of power that sets limits on the kinds of change possible. Power, according to Mintzberg (1984: 208), is "the capacity of individuals or groups to effect, or affect, organizational outcomes". Sotarauta (2009) identified four forms of power of institutional entrepreneurs as institutional power, interpretive power, resource power and network power. Institutional power enables institutional entrepreneurs to use their official position in an organisation to force other actors to act differently or to change their preferences. Institutional entrepreneurs' interpretive power allows them to rely on their expert knowledge to convince key persons to change their perceptions of their roles and responsibilities. On the use of resource power, institutional entrepreneurs' access to financial resources allows them to facilitate and

control processes of institutional change. Network power allows institutional entrepreneurs to use their personal networks to develop initiatives, obtain new information and come up with strategies to facilitate institutional change.

Along similar lines, Helmsing (2013) argued that the ability of actors to enable institutional change depends on the resources and the power they hold in the field of action concerned. The power available to the group for action can be "either financial or knowledge resources as well as their political and social networks" (Helmsing 2013: 10). In this thesis, I examine power in the context of the capacity to act through the exercise of agency, which emerges through collaboration and partnership with others; that is, "the power to" and "power with" (Gaventa 2006). Specifically, I look at power in three dimensions: (i) use of position to control people's thoughts and influence their preferences, choices and decision-making; (ii) use of expert knowledge and finances to facilitate change; and (iii) use of network powers to develop initiatives and obtain new information and strategies to facilitate institutional change.

Fligstein (1997) argued that actors' skills are important in the process of change, referring to such skills as social skills. "Social skills are the ability to mobilise co-operation among different actors/networks by employing their collective interest, preferences, identities, and resources to justify actions" (Fligstein 1997: 398, DiMaggio 1988: 15). Veblen called this "habitus", which he identified as an important tool for analysing the actions of other actors (Fligstein 2001: 109).

The strategies adopted by institutional entrepreneurs also produce resources. These include framing actions, direct authority, agenda setting, aggregating interests, maintaining networks and forging relationships with other actors to ensure collective action (Fligstein 1997, Hardy and Maguire 2008). Hitman and Meijerink (2010) found that actors' capacity to realise a transition in water policy involved employment of the following strategies: development of new ideas, building coalitions and selling ideas, recognising and exploiting windows of opportunity, and orchestrating and managing networks. Successful deployment of these strategies for change requires special skills, actions and attitudes on the part of the policy entrepreneur.

The current study acknowledges that actors' entrepreneurship or agency is enabled by command over allocative and authoritative resources. These are understood to include physical characteristics as well as the

distribution of water resources and the size of water infrastructure. Other resources are existing institutions (both state-led and community-led), technical capacity, knowledge and access to information, social position, social skills and access to social and personal networks. These resources together are a source of power, which allows institutional entrepreneurs to resist, modify or facilitate institutional change.

3.5.5 Motivation for actor entrepreneurship

Overall, some evidence seems to indicate that problems are a necessary precondition for institutional entrepreneurs to emerge. However, a growing body of literature on institutional entrepreneurship emphasises the motivations and logic behind institutional entrepreneurs' actions as the key condition to enable actor agency and engagement in entrepreneurship. In this regard, findings from organisational studies have proven useful for understanding the factors that motivate institutional entrepreneurship. Schneider and Teske (1992) maintained that political and economic factors are among the main triggers that stimulate entrepreneurs to be active.

Some scholars suggest that uncertainties, crises and conflicting objectives of policy; multiple and heterogeneous components of complex systems; and ambiguous relationships between actors and institutions provide the opportunity, resources and assets for actor creativity and innovation (Sheingate 2003: 186). Others argue that ideology, identity and worldview provide the medium through which actors interpret policies and shape their choices and practices (Hardy and Maguire 2008).

Yet, even though most of the institutional entrepreneurship literature focuses on the role of uncertainty and motivational factors in generating the emergence of entrepreneurship, the motivations and logic behind actors' behaviour remain unclear and unaccounted for in most studies.

March and Olsen (2006) maintained that actors' motivations must be explained both from the perspective of actors' interests (a logic of instrumentality) and actors' moral and social values (a logic of appropriateness). A logic of appropriateness entails embedded ideologies, worldviews, norms, identities and cultural values that inform and motivate actions and decisions. These embedded, community-led institutions are taken for granted by actors, but they nonetheless influence how actors interpret, understand and give meaning to events (March and Olsen 2006, Campbell 2004). From an economic perspective (logic of instrumentality), expected

economic benefits motivate actors to change an institutional arrangement or engage in entrepreneurship. These include but are not limited to goals of reducing operational costs, finding a solution to a technological challenge, dealing with accountability-related issues, and resolving challenges related to institutional and technical capacity.

Similar to other scholars (e.g., Hall and Taylor 1996, March and Olsen 1989), I argue for the influence of broader factors, beyond merely economic justifications. That is, this thesis acknowledges the role of identity, social position, moral values, emotions, embedded ideologies, worldviews and everyday practices as informing actor agency (Campbell 1998, Cleaver 2012, Long 2003, Leftwich 2010a, Gómez 2008). These factors influence actors' motivations, logic and final actions and practices. Nevertheless, as pointed out by Campbell (2004), institutional entrepreneurs do not enjoy complete autonomy in the kinds of change or innovation they may adopt. Likewise, this study recognises that the extent to which entrepreneurs may engage in any form of innovation or change depends on their ability to mobilise supporters, to overcome opponents and their command over existing resources.

By extension, I look at how actors use institutions and their access to resources to resist and engage in institutional change or to solve problems, irrespective of the constraints imposed by the environment.

3.6 Conceptual framework

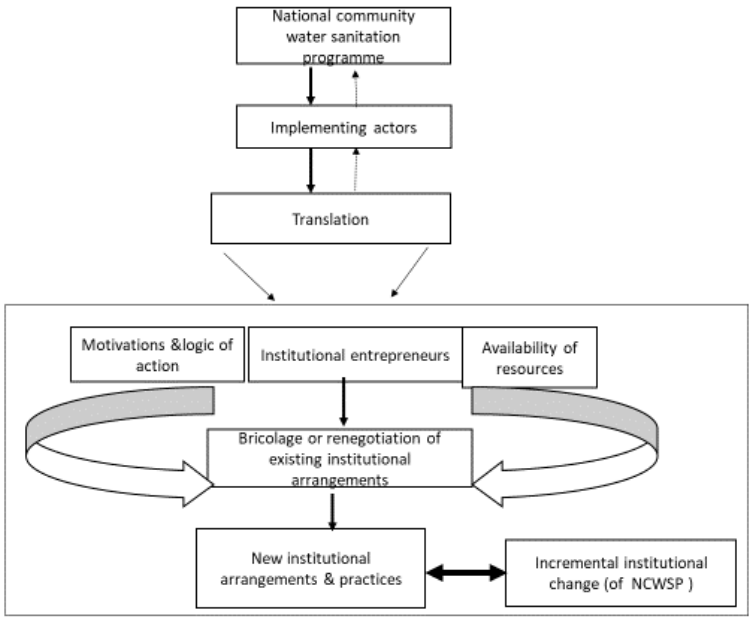
This study employs three interrelated concepts – translation, bricolage and institutional entrepreneurship – to investigate processes of institutional change associated with rural water supply under the NCWSP in Ghana. Processes of institutional change are defined as the conscious and unconscious activities of negotiation, decision-making, interactions and practices which institutional entrepreneurs or change agents use to make creative and innovative changes in the governance of rural water supply (Franks and Cleaver 2007). The three interrelated concepts are combined to capture some of the complexities in the interactions found between actors in NCWSP implementation.

Implementation of the NCWSP involves actors from two levels: the state level and the community level. Actors at the state level include those from ministries and other agencies, international organisations, the private sector and local government administration. At the community level,

actors include local water professionals (members of the water, sanitation and management teams and other water personnel) and water users. These actors are responsible for implementing the NCWSP, though they are located in different local social and institutional contexts, which influences their interactions and capacity to implement the programme (figure 3.1).

In implementing the NCWSP, contextual factors influence how actors defined their interests and problems and how they perceived opportunities for change, alongside the strategies they adopted and the practices they engaged in to navigate the challenges they faced in the process. Institutional and resource constraints limited implementers' capacity to realise institutional change, while also providing means to allow actors identified as institutional entrepreneurs or bricoleurs to resist, modify or change institutional arrangements under the NCWSP. The processes through which actors resisted and modified institutional arrangements occurred through institutional bricolage or entrepreneurship.

Figure 3.1
Conceptual framework for understanding processes of institutional change under Ghana's National Community Water and Sanitation Programme (NCWSP)



Translation enables us to understand the implementation of policies in actual practices. The surrounding environment and motivations and logic influence actors' choices and practices. Bricolage here implies that actors revoke local community-embedded institutions and apply the resources available to them to resist or facilitate institutional change. Institutional entrepreneurship here implies that actors renegotiate state-led institutional arrangements in order to resolve the challenges they encounter in implementing the NCWSP.

State-led institutions are those designed to realise the objectives of the NCWSP. Examples are the 5% contribution required of communities to defray the initial cost of the water project, establishment of water user groups, and activities to ensure the efficient operation and management of the water system (see chapter 4). Community-led institutions are local norms, cultural practices and values based on which actors relate to one another. In addition, actors' capacity to engage in bricolage or entrepreneurship is reliant on their access to resources (e.g., technical capacity, finances, power relations, expert knowledge and programme information, social networks, social skills and the physical characteristics of the water resources at their disposal).

Implementing actors invoked these existing institutions and resources to resist and modify institutional arrangements under the NCWSP. Engaging in institutional change was not automatic, however. The motivations and logic behind actors' choices and practices and their command over resources informed the actions they undertook to invoke their agential capacity or intentions. Institutional entrepreneurs were motivated by normative and cognitive considerations (logic of appropriateness) and economic benefit (logic of instrumentality) to engage in bricolage or entrepreneurship.

3.7 Conclusion

As mentioned at the start of this chapter, institutional change occurs either rapidly, as a collective action process, or gradually or incrementally, as an evolutionary process. In actual practice, change is seldom linear or straightforward. It is a messy blending of different practices influenced by structures within the local social and institutional context. The motivations and logic behind actors' choices and practices play a key role in processes

of change. Path dependence, structure and agency are useful causal concepts to explain actors' motivations and agency. Yet, these concepts are not convincing enough, as many critics have observed. The thrust of the matter is that the mechanisms or processes that enable us to understand why change appears in a particular pattern (revolutionary or evolutionary) remain unknown in most institutional change scholarship.

Translation, bricolage and institutional entrepreneurship provide a conceptual link to understand the mechanisms and processes by which actors change, negotiate or resist implementation of institutional change. The current study seeks to use these concepts to understand how and in what ways actors may differ in the choices they make under the constraints of structures in their local context. Moreover, I investigate the extent that institutional factors and other resources influence actors' capacity to resist, change or promote institutional change. This serves to account for actor agency, allowing us to better specify the processes by which institutional change is path dependent and evolutionary in nature.

Notes

[1] Everyday practices are multiple, repetitive actions that people engage in and which enable access to water to be managed and extended to those otherwise cut off from a secure supply (Peloso and Morinville 2014: 122).

[2] The terms "community-led" and "community-embedded" institutions are used interchangeably in this study.

4 Development of the Small Town and Rural Water Sector in Ghana

This chapter provides background information on the water sector in Ghana. It first looks at water management and practices during the pre-colonial and colonial periods. It then examines the historical development of small town and rural water supply in Ghana (section 4.2). Section 4.3 introduces reforms in small town and rural water supply under the National Community Water and Sanitation Programme (NCWSP), including the institutional framework which provides clarification of roles and responsibilities under the programme. The chapter ends by looking at current trends and challenges in implementing the NCWSP.

4.1 Customary water management and practices in Ghana

During the pre-colonial and colonial periods, most people in Ghana depended on natural sources, such as rainwater, rivers, lakes, streams and ponds, for water for drinking and domestic uses. To ensure that these water resources were sustainably managed, traditional actors, informed by customary laws,[1] established a number of rules to coordinate water resource usage. The activities of these traditional actors were rooted in the belief that water is a gift from the gods and must therefore be free and accessible to everyone.

In most ethnic communities in Ghana, the Akan community in particular, lands are inherited from ancestors and handed down from generation to generation. Land and water resources are held as common property and not subject to individual ownership. Ownership of land and other natural resources is vested in families, communities and "stools" symbolising the chieftain's leadership.[2]

Institutional arrangements for water resource management stem from customary law, including community norms, customs, beliefs and practices. These are handed down through the generations, accepted as

binding, and regulated and enforced by traditional actors (Burchi 2005, Gbedemah 2011).

According to custom, chiefs[3] and other traditional actors are the earthly representatives of the ancestors and gods in the spiritual world. Ideally, these earthly representatives perform social, religious, administrative and judiciary functions. In addition, before colonial rule they were in charge of grassroots governance (Bamfo 2000). Traditional actors represented all members of the community under their control, and their authority and legitimacy was unquestioned. This power allowed them to engage in activities such as rule enforcement and dispute resolution. For example, disputes regarding water use were traditionally resolved through tribunals constituted by the chiefs and elders (Agyenim 2011).

Reverence for the gods and for the institution of traditional authority has given chiefs the influence and legitimacy to enforce community rules. For example, they can banish people from the community for non-compliance or non-adherence to rules. As a result, compliance with community rules remains high. Examples of such rules include not washing close to water sources, keeping the surroundings of water sources clean, not farming along river banks and not visiting water sources on specific days (like taboo days). Violation of customary laws is considered an offense against the gods. Offenders are punished by imposing fines, which are payable in cash or in kind to local chiefs, priests or priestesses. The fines are to pacify the ancestors and gods so that they do not punish the whole community. As a result, most customary laws are self-enforcing, as all community members ensure that everyone complies with the rules to avert some calamity befalling them all.

During the pre-colonial period, customary water laws were adequate for the management and protection of water resources. However, with the emergence of colonisation, accompanied by industrialisation and urbanisation, customary laws became inadequate for water governance. The customary water laws were sufficient to govern small communities with more simplistic domestic uses of water resources. Increasingly, however, more urbanised and heterogeneous populations challenged the adequacy and efficacy of customary laws for water governance (Sarpong 2005). This led to the introduction of new laws to govern water use and management. These newly introduced institutional arrangements were part of a formal legal system which bore a strong resemblance to the governance structures of the colonising country (Zaag 2007, Ocloo 2011).

The post-independence period saw the creation of laws that reduced the influence of customary laws and practices for water management and rule enforcement. Ghana's Water Resources Commission, for instance, created by an act of parliament in 1996, weakened the powers of traditional actors in managing and enforcing customary rules on natural water resources. The act abolished the customary ownership of water hitherto vested in the "stools" and communities. The state government assumed ownership, control and management of water resources and enforcement of rules (Water Resource Commission of Ghana 2008).

The newly established formal rules diminished the authority of the chiefs in water management and resource protection. However, the new rules did not entirely displace their control and power in water governance. Customary laws and practices continued to exist alongside formal written rules in water governance.

As a number of studies observe, it is difficult to draw a clear-cut distinction between customary laws and formal written laws and rules. Some aspects of the traditional system of water governance continue to function and flourish up to this day (Sarpong 2005). Despite the changes in governance and shifts in the chiefs' role that have occurred since the pre-colonial era, chiefs continue to play an active role as both regulators and enforcers of customary laws, alongside state-initiated rules and laws in Ghana's rural communities.

4.2 Water infrastructure regulation in the colonial era

Indirect rule was the main governance system adopted in the colonial era. Under indirect rule, both British and traditional governance systems were conflated into one governance system. Colonial actors made extensive use of traditional authority and actors by forming alliances with chiefs organised under a native authority for local governance. Under indirect rule, the governor enacted laws with the assistance of executive and legislative councils made up of Europeans,[4] while traditional actors maintained law and order and social services locally. It is important to understand that although the chiefs were responsible for actual implementation, their decisions were subject to final approval by the British governor, while the chiefs received protection from the colonial government[5] (Ubink 2008, Ocloo 2011). Historical and anthropological studies suggest that by

making the position of the chiefs dependent on the recognition of the colonial government, the authority of the chiefs was weakened (Bamfo 2000).

In regard to water resources, establishment of colonial rule in 1890 led to increased use of water for irrigation, transportation and industry. This necessitated new rules, and led to the introduction and imposition of new institutional arrangements for development and management of water resources (Zaag 2007).

These new rules did not replace existing customary laws and practices but rather complemented customary laws. New institutional arrangements for managing water resources took the form of laws and ordinances. Their enforcement was in the hands of various ministries, departments and agencies under state control (Sarpong 2005).

A number of laws and ordinances passed by the colonial administration sought to control water use and abstraction and guide planning and soil conservation. These included the Rivers Ordinance (CAP 226 of 1903), the Forests Act of 1927 and the Land Planning and Soil Conservation Act of 1953. These laws and ordinances replaced the authority and control that traditional actors held in the past, subsequently eroding the powers they held in water governance. This process continued into the post-colonial period after independence (Agyenim 2011, Odame-Ababio 2003).

The action of the colonial actors can be perceived from two angles. First, there was a recognition of traditional governance, as the chiefs were used to enforce colonial law and order. Second, the new laws and ordinances regulated and diminished the powers of traditional actors in maintaining and enforcing customary laws.

A number of scholars, however, observe the demise of traditional actors' powers and authority differently. Crook (1986: 75), for example, linked the demise of traditional actors' authority to the decolonisation process. In Ghana, independent parties and post-colonial elites and leaders, to reaffirm their powers, criticised the chiefs' relationship with the colonial rulers, withdrawing from them the mandate that had been granted to them under indirect rule.

The chiefs' position was certainly undermined by their allegiance to the colonial rulers over their citizens and their dependence on the colonial government for enforcing laws and ordinances. This produced a breakdown of the checks and balances inherent in the traditional system

whereby chiefs had long been controlled in the course of administering their functions. The absence of such checks and balances led to abuses of power by chiefs and traditional actors under the colonial regime, which undermined relationships between the chiefs and their subjects, thereby making the traditional authorities unpopular[6] (Bamfo 2000).

As noted, historical and anthropological studies suggest that making the position of the chief dependent on recognition by the colonial government weakened the chiefs' authority. Scholars argue that abolishment of indirect rule, too, negatively affected the role of chiefs in local government affairs (Crook 1986, Ubink 2008). A common understanding is that the role played by traditional actors during the period of colonial indirect rule explains some of the policies and laws enacted after independence. For example, under the Chieftaincy Act of 1961 chiefs were prohibited from exercising and enforcing customary laws unless they had the approval of local government ministers (Bamfo 2000). Such actions of post-colonial elites further reduced the authority, power and respect that the traditional actors had held in the past.

Despite the significantly reduced authority of the chiefs, their influence continues to prevail in current local governance. Chiefs wield much influence in both rural and urban areas, due to populations' strong adherence to local religious beliefs. These beliefs lie at the heart of the legitimacy and authority of the chiefs, and indeed their very existence. However, the colonial government's past reliance on and manipulation of the legitimacy of traditional actors has continued to have significant consequences for the direction and decisions of central and local government policies (Miller 1968).

Although customary laws are relaxed in most communities, they still play a huge role in the day-to-day management of water resources. The next section looks at changes that have occurred in the delivery and management of drinking water during the colonial and post-colonial period.

4.3 Tracing the institutional development and provision of drinking water in Ghana

Colonial actors are recognised as initiating the first major efforts to improve drinking water supply in Ghana (then Gold Coast). The Hydraulics Division of the Public Works Department facilitated construction and management of its first water project in Accra, then extending these works

to other areas, such as Cape Coast, Winneba and Kumasi. The technological make-up of the water system included water pumps, reservoirs and a piped water system (GWCL n.d.).

In 1948, a separate division was established within the Public Works Department for rural water development. This division saw the drilling of boreholes and construction of wells for rural communities (GWCL n.d.).

The period after independence ushered in a number of reforms in the water sector, in response to the severe drought that had engulfed the country. Based on studies and recommendations by international actors, the Ghana Water and Sewerage Corporation (GWSC) was established in 1965 through an act of parliament (Act 310). GWSC was made solely responsible for, inter alia, the development, operations and management of both rural and urban water supplies (GWCL n.d.).

Main responsibilities of the GWSC included providing water and sanitation services to rural and urban areas, conducting research on issues related to water and sewerage, constructing and managing water and sewerage works, setting standards and prices, and collecting revenue. In water management, GWSC adopted a centralised approach. In addition, policies on water provision and services were informed by concerns of cost efficiency and the ability of consumers and users to pay.

The activities of a spectrum of actors such as the central government, international donor organisations and NGOs brought about the initial transformation of drinking water in rural communities. Rural water facilities expanded from 2,500 in 1957 to some 5,500 by 1984 (Karikari 1996, Fuest 2006). Urban areas witnessed a rise from 35 piped water systems in 1957 to 194 in 1979 (Karikari 1996, Fuest 2006).

Although GWSC had been given the legal authority to control and manage the water sector for both cities and the countryside, the economic crises of the 1970s and 1980s made it difficult for the corporation to break even. GWSC was under-resourced in terms of both personnel and finances. As a result, the corporation was unable to expand water infrastructure and maintain existing facilities (Entsua-Mensah et al. 2007, Nyarko 2007).

The various economic crises, however, led to shortages of water in small town and rural communities. To remedy these, international organisations, external support agencies and bilateral donors[7] proposed a number of interventions and solutions. Interventions included construction of

hand-dug wells and drilling of boreholes to provide additional water (Fuest 2006). These interventions by international actors coincided with the UN's International Drinking Water Supply and Sanitation Decade (1981-1990). The aim was to expedite access to safe drinking water for all. The UN decade produced a significant increase in external support for improvements in urban and rural water delivery in Ghana (Kleemeier 2002: 4). During this period there was a leap in water infrastructure, with GWSC as the main actor in charge of management, operations and maintenance. For example, the rural sector saw a substantial increase in the number of rural water facilities, which rose to some 8,600-9,000 in total by the end of the water decade[8] (Fuest 2006, Gyau-Boakye 1999, Karikari 1996).

It is important to note that community participation in the planning, construction, operation and maintenance of water facilities was absent during this phase. Water governance from 1965 to 1994 took a supply-driven approach with the central government playing the lead role in urban and rural water delivery. Water services were provided at no cost to users. In short, water service delivery was a top-down undertaking without community participation. In addition, new water infrastructure, management and maintenance favoured urban areas, where works were more viable or politically more impactful than in small towns and rural areas. For instance, in rural areas, repairs of broken-down water facilities were halted and pumps sometimes dismantled due to unpaid bills from previous maintenance works. This situation greatly burdened the communities affected, which had to revert to unwholesome sources, leading to high occurrence of water-borne diseases (Karikari 1996).

The failure of the supply-driven approach was attributed to lack of community interest and ownership of the water schemes, due to the limited role played by beneficiaries and users in policy design and implementation of the reforms. Lack of funds, inadequate capacity, low political priority of water issues, inability to recover operations and maintenance costs, and the perception of water being free further affected the sustainability of the schemes, leading to calls for new reforms in the 1990s (Fuest 2006, Karikari 1996).

Recognition of the need for water infrastructure that could be sustainably managed led external agencies, together with key policymakers, to pursue wholesale reform of the water sector. The centralised and supply-driven approach had proven ineffective, pushing policymakers to consider other strategies. This period coincided with the implementation of a

structural adjustment programme in Ghana under the National Economic Recovery Programme (ERP) (1983-1993).

Under structural adjustment and the ERP, the water sector benefitted from huge inflows of investment capital in the form of loans and grants. This greatly expanded the country's water infrastructure. It also led to an increase in organisations and affiliate agencies responsible for coordinating and managing water resources and the infrastructure provided.

Transformation and improvement of the institutional arrangements and framework for the water sector took various forms (CWSA 2008). For instance, in 1986 subsidies for operation and maintenance of water facilities were withdrawn and user tariffs introduced. The logic behind the new institutional arrangements reflected the overall objective of the ERP, which was to introduce efficient management and thereby reverse the economic decline the country had experienced. Some scholars have observed that the new institutional arrangements sought to transform the role of the state from a provider of services to a regulator (Harvey and Reed 2006, Moriarty et al. 2013). This was in fact a goal promoted by the World Bank and affiliated agencies under structural adjustment and ERP policies. To improve the management, coordination and quality of rural[9] and small town water services,[10] a separate, semi-autonomous unit was established under the GWSC: the Community Water and Sanitation Division.

The new institutional arrangements were to improve the maintenance and sustainability of water systems. Nonetheless, with the above initiatives the challenges facing the rural water sector persisted and services deteriorated further. For example, users were unhappy with the new user tariffs and therefore resisted payment. Maintenance of facilities became another bone of contention, with communities unwilling to pay any price for maintenance and the GWSC refusing to repair the facilities until such payments were made (Fuest 2006, Nyarko 2007, CWSA 2008).

Though the intervention by international actors increased the number of drinking water facilities built, overall it had scant positive impact on service delivery. Indeed, many studies confirm that the supply-driven approach did not lead to sustainable management and maintenance of most water facilities. The GWSC was unable to keep up with facilities maintenance, and 40% of water facilities eventually became dysfunctional (Kleemeier 2002, Nyarko 2007).

By the end of the International Drinking Water Supply and Sanitation Decade, little significant improvement had been made in small town and rural water coverage. Most of the water supply facilities that had been provided had deteriorated or completely broken down. Numerous reasons have been provided, like inadequate funding for maintenance and rehabilitation works. GWSC also suffered from accountability challenges, corruption, poor management and inadequate capacity and skills (Eguavoen and Youkhana 2008, Nyarko 2007, Fuest 2006, Pilgrim et al. 2004a). The situation was worsened by GWSC's inability to recover operation and maintenance costs, due to communities' refusal to pay user tariffs. Non-payment was justified by GWSC's inability to maintain and provide water regularly, coupled with the common perception among users that water should be free.

4.4 Water reforms in the 1990s

Declaration of 1981-1990 as the International Drinking Water and Sanitation Decade was one of the earlier attempts by the UN General Assembly to ensure that countries gave priority to provision of and access to safe drinking water.

A key decision taken during this period was to transfer responsibility for providing rural water services from central government to local government. As noted, the water reforms undertaken in the early 1990s were part of a structural adjustment programme implemented under Ghana's ERP (1983-1993). The reforms were supported by a number of workshops with stakeholders, that is, line ministries, local government, the private sector, NGOs, external agencies and civil society. This chain of events led to development of the NCWSP in 1994 to finally address the water challenges confronting small town and rural communities within the country (Entsua-Mensah et al. 2007, Fuest 2006).

The NCWSP brought changes in the way water systems were managed. In accordance with international policy and the ideology at the time, administrative responsibilities in water supply were decentralised to lower governance levels. The Government of Ghana was obliged to fulfil the following conditions, in line with international best practices:

- to establish regulatory bodies for water supply coordination and control
- to open the sector to private participation

- to separate responsibilities for urban and rural water supply
- to ensure community participation in planning, management, ownership and maintenance of the water supply facilities provided.

The reforms of the 1990s thus resulted in separation of the rural water sector from the urban water sector. In addition, the Ghana Water and Sewerage Cooperation changed its name to the Ghana Water Company Limited (GWCL), reflecting its new role and mandate. GWCL was tasked to manage water facilities in urban areas, while the Community Water and Sanitation Division (CWSD) was mandated to coordinate water and sanitation delivery to rural areas. In December 1998, the Community Water and Sanitation Agency (CWSA) was created by an act of parliament (Act 564) to succeed the CWSD. The CWSA was mandated to facilitate provision of safe drinking water and related services to small towns and rural areas in Ghana (Ministry of Water Resources, Works and Housing, 2007).

At the sub-national level, organisational structures created under the CWSA included water and sanitation management committees for point sources; water and sanitation management teams[11] for small town water schemes; and district water and sanitation teams within the respective District Assemblies (DAs). The district water and sanitation teams monitored and coordinated the activities of the local committees and water and sanitation management teams. Other structures created included regional water and sanitation teams under the Regional Coordinating Councils (RCC) and regional offices of the CWSA. These regional structures were to coordinate, assist and facilitate the district structures, helping them to fulfil their respective roles (Ministry of Water Resources, Works and Housing 2007).

The 1990s water reforms presented water as an economic good, thus applying the principle of full-cost recovery in determining water tariffs. This principle, in addition, implied the need for efficiency in water system management. Local government was given a key role in providing water to small towns and rural communities. The assumption here was that local government was in a better position to identify and respond to consumer preferences. Central government agencies, in turn, facilitated and regulated the activities of local government (CWSA 2008). Furthermore, private sector involvement was encouraged, with beneficiary communities called on to participate in key decision-making processes. Through this new institutional arrangement, communities would gain a sense of

ownership over their water supply system. The thinking was that this sense of ownership would translate into sustainable management and maintenance of the water facilities (Entsua-Mensah et al. 2007).

4.4.1 National Community Water and Sanitation Programme (NCWSP)

With the National Community Water and Sanitation Programme (NCWSP), the Government of Ghana sought to provide safe drinking water and sanitation services, as well as means towards improved hygiene, for small towns and rural communities. The programme was developed with the assistance of the World Bank. The first Community Water and Sanitation Programme (CWSP-1, 1994-1999) was implemented with the assistance of international development agencies in four regions of the country. That programme was soon expanded to cover all of Ghana and grew to involve other bilateral donors such as the Danish Development Agency (DANIDA) (Fuest 2006).

As noted earlier, the CWSA was created by an act of parliament (Act 564) to succeed the CWSD. It was mandated to facilitate and implement the second phase of the NCWSP (2000-2009) (Ministry of Water Resources, Works and Housing 2007). That programme phase aimed to reverse years of low coverage and unsustainable management and maintenance of existing water facilities within Ghana's small towns and rural communities. The objectives of the NCWSP were three:

- to provide basic water and sanitation services to communities that would pay for the operation, maintenance and repair of their facility, mindful of the need to ensure affordability, equity and fairness for the poor and vulnerable
- to ensure facility sustainability through community ownership and management and citizen participation in all decision-making, while ensuring active involvement of women at all stages of the programme and involvement of the private sector in the provision of goods and services
- to maximise health benefits by integrating water, sanitation and hygiene promotion interventions, calling on communities to select the water technologies that would provide them the best service, with that selection guided by community preferences,

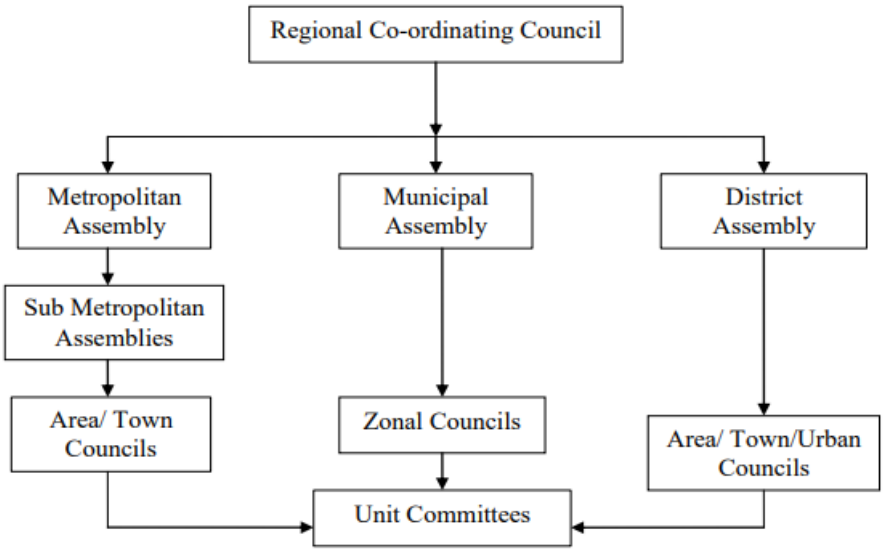
affordability and ability to operate and maintain facilities in a sustainable manner (CWSA 2010a, 2014; GoG 2014)

Ghana's decentralisation policy and national water policy provided the framework for implementation of the NCWSP (CWSA 2014). A shift from a centralised approach in water supply services to the involvement of stakeholders, including the private sector, local government and communities, reflected the public sector reforms required by the World Bank under structural adjustment and the ERP. Another feature of the community management approach adopted was involvement of non-state actors, such as community-based organisations, NGOs and educational and research institutions, as well as private businesses, in management, operation and maintenance of water facilities, as well as in training, well drilling and materials supply. Opening up the community water sector to the private sector was another aspect consistent with the ideologies of the World Bank and International Monetary Fund at the time, as they were pushing for decentralisation and privatisation to catalyse improved public services.

At the local level, works departments were created to serve as the technical arms of the DAs for the delivery of water and sanitation facilities. The desire to decentralise the water system to the local level led the CWSA to create regional offices to support the works departments of the various DAs.

The decentralised approach was founded on the assumption that a transfer of powers from the central government to the DAs would give the DAs sufficient power to develop and manage basic water infrastructure. Under the new institutional arrangement, actors' roles and responsibilities were to be redefined and their capacities strengthened to match their new roles and responsibilities (CWSA 2014). Figure 4.1 presents the decentralised governance structure.

Figure 4.1
Decentralised local governance structure in Ghana



Source: Braimah and Kheni (2013)

The Local Government Act of 1993 transferred authority and responsibility from central government (ministries, departments and agencies) to the DAs (local government administrative units). Under the new governance arrangement, the central ministries and departments would undertake policy planning, monitoring and evaluation. Coordinating roles were assigned to the regions through the RCC and CWSA regional offices. Metropolitan, municipal and district assemblies[12] were made responsible for implementation of central government policies. The assumption was that the transfer of power from the central government to the DA level would enable the DAs to take a central role and responsibility for coordinating, monitoring and supporting communities in managing their water facilities (MLGRD 2010, Braimah and Kheni 2013). In order to deliver effectively on its new roles and responsibilities, the DAs received technical assistance in planning, design, construction and supervision from CWSA and from private sector organisations.

Local water and sanitation management committees and teams were made responsible for the day-to-day management of community water systems. Alternatively, in consultation with the metropolitan, municipal or district assemblies, these teams could contract the services of a private firm for management of their water facility.

Notwithstanding the above institutional arrangements, the decentralisation process brought institutional constraints that have had huge effect on the ability of CWSA and the DAs to perform their expected roles. These constraints emanate from flaws of the decentralisation programme. For example, most national actors are misinformed, planning processes are complex and uncoordinated, and roles conflict, while short-term political interests prevail.

Aryee (1997) identified several challenges facing the decentralisation framework. First, the decentralisation process has been slowed by the central government's resistance to change, due to its loss of power in the decentralised governance system. Secondly, while administrative decentralisation has proceeded, fiscal decentralisation has lagged behind. Thirdly, incompleteness of the decentralisation process has left gaps through which bureaucrats and politicians can abuse the system to serve their own interests. Fourth, institutional structures to hold actors accountable for their actions (or inaction as the case may be) remained absent (Amanor and Annan, cited in Fuest 2006).

From the above, it is unsurprising that the DAs, like other state entities, have acted with impunity in the water sector. For example, structures established to ensure compliance have been bogged down by corruption, neglect of duties, rent seeking, nepotism and power struggle.

Besides, lack of regard for informal structures in the drafting and design of policies has contributed further to the challenges confronting water policy implementation. Interconnections between state rules and community-embedded rules have been ignored or taken for granted in the institutional reforms. This explains some of the distortions and failings of the institutional reforms, dictating the path of institutional change.

4.4.2 Institutional arrangements under the National Community Water and Sanitation Programme

A key component of the NCWSP is its emphasis on the demand-responsive approach. Herein, water is viewed as an economic good, implying that consumers must pay for water services. In addition, communities decide whether they want to participate in water facility projects, demonstrating their commitment to the project by paying a 5% contribution to the total cost of the proposed water facility. The logic behind this approach is to empower beneficiary communities to make choices and decisions as to the type of technology and services that best fits their needs (CWSA 2014a, 2014b).

Notwithstanding the above, beneficiaries were restricted in their choices due to their limited knowledge of alternatives, such as rain harvesting systems and protection of existing water sources, which may well have been cheaper and easier to operate and maintain (Fuest 2006). The guiding principle of the NCWSP was to ensure the economic sustainability[13] of the water facilities provided. The approach presumed a shift in the government's role from service delivery to monitoring and facilitation, ultimately allowing communities to become self-reliant rather than dependent on government agencies for system operation and maintenance.

A fundamental feature of the NCWSP is its emphasis on community ownership[14] and management within the framework of decentralised delivery. That is, it recognised that communities, as custodians of the land, would be in a better position to ensure sustainable management of their water facilities if they were involved in all decision-making processes (CWSA 2014a, 2014b).

Basic design requirements for community water facilities[15]were drawn up with which small town water supply facilities had to conform (CWSA 2010b). As part of the institutional arrangements, the aforementioned water and sanitation management committees and teams had to be established in each beneficiary community to ensure efficient and sustainable facility management.[16] These teams would carry out the day-to-day management of the water system, receiving complementary support from the members of the local, or zonal, water and sanitation management committees (CWSA 2010b). The teams recruited the services of technical and financial personnel[17] to assist them in their day-to-day operations and

management tasks. In addition, the teams set tariffs in accordance with CWSA guidelines,[18] with final approval given by the DAs.

Another feature of the NCWSP was its emphasis on public sector facilitation in the operation and management of water facilities. CWSA, as the main coordinating organisation, set standards and developed the policy guidelines. In addition, CWSA was to provide training and technical, professional and financial support to the water and sanitation management committees and teams, alongside other actors involved in NCWSP implementation (CWSA 2014).

Under the NCWSP, women were actively involved in the design and management of the water supply facilities. This was an important aspect of the programme given that women and children, boys as well as girls, were responsible for fetching water, and this task sapped valuable time that could be devoted to school attendance or other economic activities (CWSA 2014b: 6-7, 2014a, 2008).

Most funding for the water facilities developed under the NCWSP came from credits and grants provided by international development partners and the Government of Ghana (altogether they paid 90%), the beneficiary communities (5%) and the responsible metropolitan, municipal or district assemblies (5%) (CWSA 2014, GoG 2014).

The project cycle[19] for NCWSP implementation began with the launch of the programme in the respective DAs. The beneficiary communities then met and discussed what type of water technology and management options they preferred. The community then made a formal request to the metropolitan, municipal or district assembly in the form of an expression of interest, facilitated by the private sector (a partner or technical assistance organisation). The DA evaluated all applications and selected beneficiary communities according to the following criteria: evidence of the 5% contribution, population size, existing facilities, current economic activities within the communities and absence of conflicts.

The partner or technical assistance organisation leading the process sensitised and provided all information on the NCWSP programme to the beneficiary community. Based on that information, the community prepared a proposal, a facility management plan and a feasibility report for funds mobilisation. Towards assurance of efficient water system management, a water and sanitation management committee and team were established and trained.

Although the NCWSP covered water, sanitation and hygiene-related issues, the focus of the current study is limited to issues connected to small town and rural water supply systems. Issues related to sanitation and hygiene, which the NCWSP also covers, are beyond the scope of this research.

Table 4.1
Roles and responsibilities of key organisations and actors implementing the NCWSP

Actors/Organisations	Roles and Responsibilities
Development partners	Provide financial, technical and logistical support for NCSWP implementation
Ministry of Local Government and Rural Development	Formulate governance policies and develop sector plans, provide management advisory services to the metropolitan, municipal and district assemblies
Ministry of Water Resources, Works and Housing (MWRWH)	Formulate strategies, mobilise resources and ensure sector coordination, planning, evaluation and monitoring
Water Directorate (established within MWRWH)	Coordinate activities of the Community Water and Sanitation Agency (CWSA), Ghana Water Company Limited (GWCL) and the Water Resources Commission (WRC)
Community Water and Sanitation Agency (CWSA) headquarters and regional offices	Coordinate and facilitate NCWSP implementation
Metropolitan, municipal and district assemblies/works departments	Implement the NCWSP, support local water actors through coordination and monitoring, provide financial support, and prepare district water and sanitation plans in line with medium-term objectives
Water and sanitation management committees and teams	Operate, manage and maintain water facilities
Water personnel	Oversee technical and financial management of the water system
Private sector, technical assistance and partner organisations	Provide training, mobilise community and promote hygiene and sanitation, provide institutional support, construct water facilities and provide services
Community	Express demand for services, including preferences regarding technology and service level
Private water operators	Operate and maintain water supply infrastructures, including electrical and mechanical equipment and hand pumps, manage and operate water supply schemes

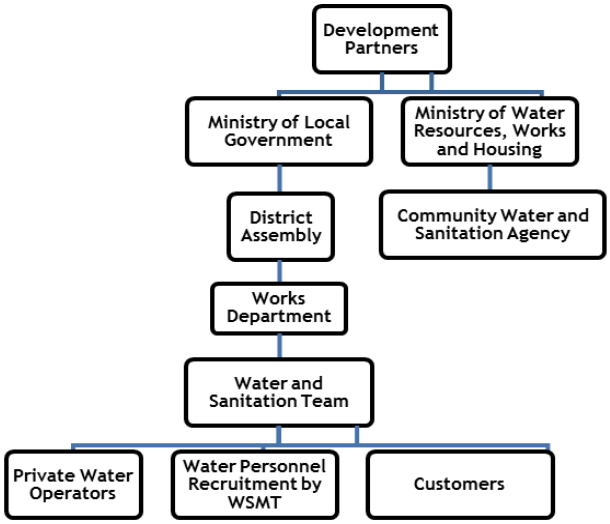
Source: Community Water and Sanitation Project Implementation Manual

4.4.3 Institutional arrangements: Roles and responsibilities of key actors

The decentralisation of water services ushered in different modalities and practices, which led to changes in the institutional, financial and regulatory framework for water management. The new institutional arrangements introduced an increased number of actors and organisations directly or indirectly responsible for implementing the NCWSP. The institutional framework developed for small town and rural water supply describes the expected processes of actor collaboration and coordination. In addition, the framework provides clarity on the roles and responsibilities of key actors and organisations implementing the NCWSP (Table 4.1).[20]

To understand the relationships between the various actors in implementation of the NCWSP, we need to understand the institutional arrangements made for the provision of water in small towns in Ghana (Figure 4.2).

Figure 4.2
Arrangement of institutional actors involved in NCWSP implementation



Note: WSMT=water and sanitation management team.
Source: NCWSP Project Implementation Manual (2014)

While there was a strong relationship between donors, ministries and the CWSA, the relationship between the CWSA and the DAs was weak. The DAs legally owned the water system,[21] though the physical owner was the communities. The water and sanitation management teams operated and managed the water system on behalf of the concerned metropolitan, municipal or district assembly and beneficiary community.

There were two ways to operate and manage the small town water supply systems:[22] community-based management and private-based management. Community-based management was found in communities, with a population less than 10,000. Here, technical and financial staff were employed for the day-to-day management and maintenance of the water system. Private-based management was found in communities with a population greater than 10,000. Here, the water and sanitation management team in consultation with the DA delegated responsibility for management of the water system to a private organisation. The management team then supervised the activities of the private organisation, with the management team's activities monitored and coordinated by the works department. The CWSA coordinated the activities of the DAs and local water actors (CWSA 2010b).

4.4.4 Relevant policies and legislation for NCWSP implementation

A number of rules inform and guide NCWSP implementation. These include policies, acts of parliament, strategic documents, guidelines and manuals (Table 4.2).

Table 4.2
Rules and practices guiding NCWSP implementation

Type	Document	Purpose
Policy	National Water Policy (2007), Ministry of Water Resources, Works and Housing	Provides the main institutional framework for planning, implementing, coordinating and monitoring the activities and interactions of all water actors
Acts of parliament	Community Water and Sanitation Act,1998 (Act 564)	Specifies the roles and responsibilities of CWSA
	Local Government Service Act (2003)	Describes governance arrangements for decentralising activities to local government, the various structures established to implement the decentralisation programme, and the roles, functions and inter-relationships among subnational structures and actors

	Legislative Instrument of Community Water and Sanitation Regulation (LI 2007)	Provides the regulatory framework which enables and authorises the CWSA to develop standards, key directives and guidelines to enforce compliance with the acts, norms, standards and guidelines to ensure sustainability of water services
Strategic documents	Water Sector Strategic Development Plan (2012-2025)	Provides the framework for implementing the chosen vision, policy objectives and targets for the water and sanitation sector
	Strategic Investment Plan (2008)	Updates the Strategic Investment Plan (SIP) 2005– 2015 and presents a medium-term plan for 2008-2012
Guidelines and manuals	Small Town Sector Guidelines, Design Guidelines, November 2010 Sector Guidelines, General, November 2010 Small Town Sector Guidelines, Operations and Maintenance, November 2010 Water Safety Framework, November 2010	Elaborates standards to be followed in NCWSP implementation, covering the following: - design of water and sanitation systems - community mobilisation, hygiene and sanitation promotion - operation and maintenance of water supplies - water quality and safety
	District Operations Manual, Volume 1(2014)	Serves as a reference document for the DAs implementing the NCWSP
	National Community Water and Sanitation Strategy (2014)	Provides an overall framework for implementation of the NCWSP, sets out the overall strategy to achieve the government's vision for the rural water sector as enshrined in the Water Sector Strategic Development Plan (WSSDP)
	Project Implementation Manual (2014)	Provides guidance for WASH project management and implementation towards realisation of national goals; sets out implementation rules, procedures and processes to achieve the NCWSP objectives
Cultural beliefs and practices	Rules, social norms, cultural beliefs and practices, symbols, scripts, everyday practices	Origin of all embedded rules and practices through which communities interact among themselves
By laws	Model by laws prepared by CWSA which communities could adapt to prepare community-specific by laws to guide their day-to-day activities	Guides service providers and users in how systems are to be operated and managed
Contractual documents	Management contract agreement document	Legally binding document signed by DAs, water and sanitation management teams and private operators detailing how a water facility will be operated and managed by a contracted private organisation

Source: National Community Water and Sanitation Strategy (2014: 49-51)

4.4.5 Defining rural and small town communities

Small towns are settlements that are relatively large and dense. They usually have a population of between 5,000 and 50,000, but can be larger or smaller (Pilgrim et al. 2004). Their size enables them to benefit from the economies of scale offered by small town piped water systems. However, they are too small and dispersed to benefit from conventional urban water facilities. Small town water systems require formal institutional arrangements that provide a legal basis for ownership and management. In addition, the systems must have the capacity to expand to meet growing demand for water.

Following the NCWSP, the current study defines a small town as referring to towns and clusters of villages with the following characteristics:

- population between 2,000 and 50,000
- a small town water supply system as their main source of water
- has committed to own, operate and maintain its water supply system either itself or by delegating the responsibility to another body, such as a private organisation
- sets its own tariffs and other operational policies in close consultation with the DA (Entsua-Mensah et al. 2007: 8, CWSA May 2004, CWSA January 2010b)

Communities within the context of this study are defined as groups of individuals living in close proximity to each other that are able to identify a need (a water supply facility) and come together in the interest of their own development. The size of the community determines the nature and size of the water project (small town water facility), which can include other neighbouring communities that will make direct use of the facility.

4.4.6 Reflections on NCWSP implementation

Over the years, there have been significant changes in water provision in small towns and rural communities in Ghana. For example, implementation of the NCWSP increased water coverage from 30% before the reforms of 1994 to 64% in 2014. The total number of people served and given access to potable water as of 2014 stood at 12,212,073, out of a target population of 19,081,524 (http://www.cwsa.gov.gh/cwsa). Nevertheless, a number of studies show the situation on the ground to be less positive than these figures suggest, as most water systems are dysfunctional, break down frequently or face serious operational and management

challenges (Eguavoen and Youkhana 2008, Karikari 1996, Nyarko 2007, Fuest 2006).

Two decades into NCWSP implementation, a number of challenges continue to bedevil the water sector. The difficulties can be categorised into three types of constraints: financial, institutional and technical (CWSA 2008, 2014b, 2014a, 2010a, 2010b).

Financial

A first type of challenge affecting implementation of the NCWSP is inadequate budgetary support from the metropolitan, municipal and district assemblies for water-related activities (National Water and Sanitation Strategy 2014: 3). This has undermined the works departments' ability to monitor and coordinate water activities. Financial support from the DAs to the communities has not been forthcoming for major repairs, rehabilitation, upgrades and expansion to cover new areas. Moreover, current tariffs are inadequate to cover future replacement costs, to recover operations and maintenance expenses, or to pay for upgrades, expansions and rehabilitation. The irregularity of financial and technical audits by service regulators has exacerbated the situation, as revenue from water sales is sometimes mismanaged. Non-adherence to financial regulations and insufficient financial accountability to the communities have further threatened the financial standing of most small town water systems.

The above factors pose a threat to the future sustainability of existing small town water facilities. In addition, the national government's inability to provide CWSA the resources it needs to carry out its roles and responsibilities has worsened the situation. This has led to the collapse of many water facilities, with many of those remaining on the brink of collapse (CWSA 2014: 24).

Institutional

Inconsistencies in the overall policy framework, such as lack of a uniform mechanism for organising financial flows and inadequate information sharing and dissemination of project knowledge, have affected coordination and collaboration within the water sector. The central government's inability to support ongoing monitoring and evaluation of the programme, coupled with the failure of the DAs and CWSA to provide post-project implementation support to beneficiary communities, has caused the situation to deteriorate further. Local water actors, particularly the water and

sanitation management teams and water facility personnel, have been left to manage the water systems on their own. New local water actors seldom receive training, and old ones lack refresher training and technical support (CWSA 2014: 3).

Cooperation and relationships between state and local actors have failed to materialise, again aggravating the situation. For example, the introduction of the new water and sanitation management governance structures, particularly the local committees and teams, bypassed the customary governance represented by traditional actors. Yet, these new actors are required to ensure compliance from members of the community. Attempts to impose such a formal structure could be perceived as a challenge to traditional authority. This has resulted in frequent interference by chiefs in the enforcement of rules such as the setting of tariffs, recovery of user fees and appointment of members to the water and sanitation management teams.

At the same time, traditional governance structures at the local level have continued to show reluctance to support the new institutional arrangements for rural water development, due to power struggles and the limited involvement of traditional actors in the early years of NCWSP implementation. As a result, the DAs and CWSA and their regional counterparts often become caught up in webs of conflict, and little has been done to address the underlying cause of these conflicts (Nyarko 2007, Nyarko et al. 2011).

In addition to the above, politicians and chiefs have taken advantage of the tensions and conflicts between DAs and the CWSA to reinforce their own power, by controlling implementation of the water reforms. Nyarko et al. (2011) found political interference in the management of water systems. In addition, in numerous cases, tensions and conflicts between DAs and water and sanitation management teams have led to the dissolution of teams or degenerated into lawsuits to counter such dissolution.

Furthermore, community members' perception of water as a resource that should be freely accessible and used (with no payment required) still prevails. This contradicts the economic notion of water introduced under the demand-responsive approach, which emphasises that the full cost of water provision and infrastructure maintenance should be recovered via tariffs. Under the new institutional arrangements for water supply, communities understood that their 5% contribution to the water infrastructure would give them full ownership; hence, that they would not have to pay

further for water use. In view of that understanding, community members perceive charging fees for facilities maintenance as unjust.

Several studies point to power struggles between politicians, senior bureaucrats, traditional actors and local elites, as well as resistance from the water and sanitation management committees and teams, as the main reasons for the poor performance of small town water supply systems (Fuest 2006, Eguavoen and Youkhana 2008, Karikari 1996, Nyarko 2007). This has undermined achievement of the NCWSP objectives. To curtail some of the challenges and ensure the long-term sustainability of water facilities, some have suggested that policymakers must pay attention to the larger local social and institutional environment.

Technical

Further to the above, inadequate support for community water actors has affected the operation and maintenance of water facilities. Inadequate technical skills and lack of continued training of local water actors have aggravated the already difficult situation. Local water actors, for example, are unable to carry out routine maintenance, do minor repairs or efficiently manage the water systems (Water and Sanitation Strategy 2014: 3).

Non-adherence to norms, standards, guidelines and practices is another major challenge confronting the water sector. Inadequate information and knowledge about the NCWSP within the general community and even among local water actors has been blamed for the challenges in programme implementation. Lastly, the inability of the CWSA and DAs to enforce the rules set out to guide NCWSP implementation has undermined their capacity to effectively coordinate and bring various stakeholders together to ensure the successful translation and implementation of the NCWSP (CWSA 2014: 30).

4.5 Description of the small town water supply systems in the six sample cases

CWSA is mandated to provide water to small town areas of Ghana. "Small town water supply system" is the name given to a piped water supply scheme constructed for a small town in Ghana. Such water systems are not connected to the national urban water network. They serve populations between 2,000 and 50,000.

All of the water systems in the six cases studied draw their water from an underground source accessed by drilled boreholes fitted with submersible pumps. Other parts of the water systems include a floating overhead reservoir tank located in each community. The size of the reservoirs depend on the size of the population served and the demand for water within the beneficiary community.

In addition, there are transmission and distribution pipelines, public standpipes (i.e., central taps where inhabitants can fill containers with water to transport to their various homes) and private household connections (for individuals who can afford piping to bring taps into their home). Each water system is designed for a lifespan of approximately 15 years, and no immediate need to expand the system is expected within that period.

It is also important to note that communities relied on different sources of water before construction of the new water supply infrastructure. Appendix 11 provides details about these sources.

For the daily operation and management of a water system, a water and sanitation management committee is established within each constituency. One member of the committee is selected to serve on the water and sanitation management team representing that constituency. In all six of the cases studied, a water and sanitation management team was in place. Each had the required number of members (10-15), as indicated in NCWSP strategy documents, but the numbers varied across the cases (see appendix 12).

Cases 1, 2, 3 and 4 are water systems under community-based management. Under community-based management, a water and sanitation management team takes responsibility for the water system on behalf of the community. To assist with the technical, financial and administrative aspects of operations and maintenance, the water team recruits technical staff who are then responsible for day-to-day system management activities. Appendix 13 provides details on the staff recruited and their qualifications. Cases 5 and 6 are water systems under private-based management. Here, a private service provider manages, controls, operates and maintains the water system on behalf of the community. Under this type of management, the service provider must maintain water quality standards, carry out repairs, revenue collection, record-keeping and submission of reports and expand the system as needed.

Notes

[1] Customary laws are the customs, norms, traditions and practices of a given society transferred from one generation to the next and accepted as binding (Burchi 2005).

[2] The "stools" are symbolised by a carved stool for the Akan and skins (hides) for chiefs in the northern part of Ghana. These are believed to contain the souls of the ancestors and represent the traditional authority of the chieftaincy (Ubink 2008).

[3] Chiefs in Ghana comprise subchiefs, queen mothers, linguists, family lineages, clan heads, heads of asafo companies, priests and priestesses (Guri 2006).

[4] Some chiefs later became part of the legislative council (Ocloo 2011).

[5] Although traditional actors continued to wield a degree of authority, some of the laws were oppressive, hence leading to community resistance and refusal to comply.

[6] Under indirect rule, colonial actors made extensive use of traditional authority by forming alliances with traditional chiefs organised under the Native Authority for local governance. Traditional actors continued to wield a degree of authority, and the colonial government protected them because it depended on the chiefs to collect taxes from their subjects (Ubink 2008).

[7] These included DANIDA, the Canadian International Development Agency and the KfW Development Bank in cooperation with the German Agency for Technical Cooperation, the European Commission and the Japan International Cooperation Agency. Others were the Nordic Development Fund, the African Development Bank, the UK Department for International Development and Agence Française de Développment.

[8] Figures on the total number of rural water facilities differ from source to source.

[9] Rural communities are also known as small communities in CWSA documents. The terms "rural community" and "small town community" are used interchangeably in this thesis.

[10] Small town communities with a population of 75-50,000 fall under the direct control of the respective municipal and district administration and CWSA. Towns with a population greater than 50,000 are classified as urban and under the mandate of Ghana Water Company Limited.

[11] Appendix 1 provides details on the institutional arrangements for the establishment and composition of water and sanitation management teams.

[12] In addition to the term "District Assembly" (or DA) the term "metropolitan, municipal or district assembly" is sometimes used for broader coverage.

[13] Refer to appendix 3.

[14] The term "ownership" refers to the fact that the facilities are actually the property of the district, which holds them in trust for the community and delegates their management to the communities (Entsua-Mensah et al. 2007).

[15] Refer to appendix 4.

[16] CWSA (2007) provides a list of activities to ensure that the water and sanitation management committees and teams operate and maintain the water system in a sustainable and efficient manner (see appendix 5).

[17] Refer to appendix 6.

[18] Appendix 7 and 8 provide details.

[19] Refer to appendix 2.

[20] See appendix 9 for details.

[21] In accordance with section 15 of Act 462, the metropolitan, municipal and district assemblies have the power to delegate functions other than their legislative functions to substructures, individuals or groups.

[22] Refer to appendix 10.

5 Translating and Enforcing Participatory Water Management: From Policy to Practice

5.1 Introduction

In Ghana, principles of community management and the demand-responsive approach informed the development and design of the NCWSP. As part of the new institutional arrangements, communities were required to help pay for the initial cost of the water infrastructure (a 5% contribution). They were required to participate in the governance of their water supply facility by forming groups (called water and sanitation management teams), and to cover all maintenance and repair costs by setting appropriate water tariffs. The assumption was that such participation by the beneficiary communities would empower them to take ownership of and responsibility for the operation and maintenance of their water facility. This new arrangement would hence translate into efficient and continuous functioning of the water facilities built under the NCWSP.

A number of studies have enumerated several preconditions that are integral to the achievement of policy objectives such as those above. For example, programme objectives must be clear and consistent, access to financial resources needs to be ensured, and implementing actors with the required capacity must be available and recruited (see, e.g., Sabatier and Mazmanian 1979, 1980; Matland 1999). However, many studies document differences between centrally formulated policies and the practices actually implemented (e.g., Maynard-Moody et al. 1990, Andrews 2013, Matland 1995: 148). Factors identified as causing these discrepancies include (i) varying commitments of implementing countries towards policy reforms; (ii) insufficient information and knowledge about the policy or programme; (iii) differences in implementing actors' institutional settings and structures; (iv) inadequate technical capacity and skills among implementing

countries and actors; and (v) lack of financial resources, corruption and neopatrimonialism (Andrews 2013, Matland 1995: 148).

Under the NCWSP, we observed similar factors constraining actors' capacities to implement the programme. As this chapter will show, various environmental factors influenced actors' capacity to resist or accept institutional arrangements, particularly concerning the mandatory contribution towards the cost of the water project (the 5% levy) and formation of water management groups (the water and sanitation management teams). These institutional arrangements were put in place to ensure that beneficiary communities developed a sense of ownership of and responsibility for the water facilities provided, leading to their carrying out proper management and maintenance. Evidence, however, suggests that the institutional changes under the NCWSP were slow. Indeed, in all six cases examined, little seems to have been achieved in terms of the beneficiary communities taking ownership and responsibility for their water system.

With this in mind, this chapter addresses five key questions: (i) Under what circumstances did local actors embrace the principles of the NCWSP, and in what other circumstances did they resist or perceive these ideas to be a threat? (ii) What practices have local actors adopted to support or to frustrate NCWSP implementation? (iii) To what extent have the practices adopted empowered citizens to take ownership and responsibility for operations and maintenance or led to elite capture? (iv) What are the motivations and logics behind actors' choices and practices? (v) Can we describe actors' actions as a process of institutional bricolage?

5.2 Promoting community participation

5.2.1 Contributing to the capital cost of the water project

As part of the institutional arrangements under the NCWSP, each participating community was required to contribute 5% of the capital cost of the water facility.[1] This section focuses on how the local social and institutional context influenced actors' acceptance or resistance of the 5% contribution. It demonstrates that differences in local contexts did influence actors' interpretation and implementation of the 5% levy.

In accordance with community management principles, policymakers perceived the 5% contribution towards the cost of the water facility as necessary to ensure users' collective ownership of the project and to stimulate them to take responsibility for operation and maintenance of their

water facility. The assumption was that due to the 5% contribution, beneficiary communities' would perceive the facility as their own and be diligent in ensuring proper operation and maintenance. The new institutional arrangements were also designed to enable citizens to hold local water actors accountable for their decisions in day-to-day management of the water system. Proponents of community management argued that this new arrangement would ensure efficient management, continuous access and reliability of water flow.

Yet, an important prerequisite of institutional arrangements under the community management approach is that they must be consistent with the existing local social and institutional context. Nevertheless, in Ghana, the local social and institutional environment in many cases constrained actors in implementing the new institutional arrangements.

Under the NCWSP, to govern a rural water supply facility, the community had to form an oversight group, define rights and responsibilities, and establish rules of access to potable water and for management of the system. However, these activities cannot be divorced from the cultural, socioeconomic and political environment within which they occur (Fuest 2006: 7). Thus, in our six sample cases we found that the local social and institutional context of the implementers explained much of the variation found in implementation of the 5% contribution. Indeed, the local institutional context and pre-existing institutions invariably played an important role in the choices made and practices adopted by local actors.

First*, inadequate knowledge and lack of access to information on the water reform* influenced how beneficiaries interpreted the 5% levy and the practices they adopted. Interviews with community members suggest that most members of the community perceived the water infrastructure just like any other government project, such as schools, roads, hospitals and markets, as provided at no direct cost to users. Besides, the maintenance of these facilities was considered to be the responsibility of the state and local government organisations. As a result, users considered the 5% levy as unfair and fiercely opposed it. This was confirmed by comments made at a women's focus group discussion:

> In the past, we did not contribute towards the construction of water facilities. The District Assembly constructed and maintained all water facilities at no cost to us. It was free, what has changed now (Women's focus group, case 2, Kyerkor, 3 June 2015)?

From the above, collective participation appears to be inconsistent with the known practice by which the state government takes responsibility for the entire cost of building and maintaining water facilities provided. Before NCWSP implementation, the Ghana Water and Sewerage Corporation (a state agency) was directly responsible for development and maintenance of rural water infrastructure. This was done at no cost to the beneficiary communities (Karikari 1996). As a result, the requirement to pay 5% of the total cost of the water infrastructure in the form of a levy was new to most residents. Many resisted or refused to comply with this institutional change.

On the other hand, some users opposed payment of the 5% levy because they believed it to be a trick played by local government and water actors to steal money from citizens for their own personal benefit. After all, they knew very well that the state government provided water facilities at no cost and with no local contribution needed. Interviews with community members confirm that low levels of trust between citizens and government actors likely triggered resistance:

> You see they connived with some staff at the District Assembly to force us to pay the 5% levy when the government is providing the water for free (Group interview, case 1a, Nyamedom, 25 May 2015).

Other findings demonstrate that inconsistencies in implementation of the 5% levy across communities informed users' choices and actions. Users could not fathom why they had to comply with the 5% levy when neighbouring communities had been exempted from paying the contribution or had the actual percentage slashed by half:

> We do not understand this whole thing of paying a levy to get water when there is water all over the community. Some neighbouring communities paid nothing to get the same water projects in their communities. So why must we pay? Are we not also Ghanaians (Women's focus group, case 2, 4 June 2015)?

These finding are in line with evidence from cases 5 and 6, in which Members of Parliament paid their respective constituency communities' 5% contributions through a DA common fund.[2] The inconsistencies in implementation of the 5% levy justified users' argument that the contribution was illegitimate and a ploy by local water actors to cheat them.

In contrast to cases 1, 2 and 4, users in case 3 embraced payment of the 5% with less resistance. In that case, difficulties experienced in the past in accessing water meant that the new water facility was felt to be an urgent need, which explains beneficiaries' high enthusiasm and support for the new institutional arrangements. Past experiences and challenges in accessing water informed these users' motivations and logic, which translated into support for the new water facility by payment of the 5% levy:

> In the past, we went through difficulties in accessing water. We had to wake up as early as 2 AM to search for water to avoid long queues in the morning. We had to travel a long distance and climb hills, which are very steep. In the dry season, we even had to sleep in the streams to get water. It was a painful experience. Therefore, when we heard that the government was about to construct the small town water facility we were happy and ready to pay any levy to get the water to our community. The water project was a blessing to us (Women's focus group, case 3, Wiamoase, 26 July 2015).

Focus group discussions with school children revealed similar sentiments about the challenges of accessing water in the past:

> In the past we were always late to school due to long queues we had to join before we had water. On some days, we had to skip school to search for water. It was a terrible experience and, therefore, when we heard that we would have a new water facility we were happy (Focus group, Islamic DA Primary, case 3, Wiamoase, 27 June 2015).

Some evidence suggests that users' rejection of the 5% levy may have stemmed from a poor understanding and lack of access to detailed information about the intent of the contribution.

Nonetheless, the *physical characteristics and the nature of water resources* accounted for some of the variation in implementation. The urgent need for water influenced how beneficiaries interpreted payment of the 5% levy and the practices they adopted in response to it. Thus, the extent to which new water projects were needed to satisfy users' daily water needs determined to some extent the bargaining power they brought to bear in accepting or resisting the 5% contribution. Users with scarce alternative water sources (cases 3, 5 and 6) and those in urgent need of water were more committed, as reflected in their enthusiasm for paying the 5% levy, compared to users with access to sufficient alternative water sources (cases 1 and 2). These latter opposed implementation of the 5% levy.

The above is reflected in our observations in case 4. Here, some parts of the community had an urgent need for water. They welcomed the project and paid their share of the levy. Other parts of the community had alternative sources of water (e.g., hand-dug wells or boreholes); they opposed payment of the levy. Users offered the following rationale at a focus group session:

> Those of us staying in Ebonmu and beyond have a lot of stones in the ground, making it difficult to construct hand-dug wells. We have to go to Krobo line to get water. In addition, most of the streams closer to us, which we relied on in the past, have dried up because of the expansion of the community and human activity close to this source. The new water system was therefore needed to enable us to have water closer to us (Women's focus group, case 4, Juaso Obogu, 9 August 2015).

Similarly, in cases 5 and 6, unfavourable topography and scarce alternative water sources, alongside a high incidence of guinea-worm disease, exacerbated the challenges faced in accessing water. The need for new water infrastructure was urgent. Although users were enthusiastic about the water project, the poverty level in the communities constrained their ability to pay. This led to the decision by Members of Parliament to absorb the payment requirement:

> The water situation was so bad in the dry season, we had to spend days to get a bucket of water. We had to dig the mud and wait for the water to gather before we could fill our containers and this could take the whole night. The experiences affected our economic activities as economic time was wasted in search for water. We appealed to several politicians and the DA to get water and, therefore, when we heard that we were going to have a new water system we were very happy and were ready to provide our support both financially and in kind. It was an answer from the gods (Group interview, case 5, Tatale, 15 October 2015).

The comments above show that actors' level of acceptance or rejection of the 5% levy depended on the existing context. In particular, availability of alternative water sources (in cases 1, 2 and 4) influenced users' assessment of the situation and consequently how they interpreted the new policy requirement of a 5% contribution.

However, many studies have found that users do not always become collective owners or collectively take responsibility for implementing water reforms. In any policy change process, the presence of enforcers is key

to ensure compliance. In our case, too, the availability of enforcers was integral in ensuring compliance with the 5% levy in cases where there was resistance. The practices of key local actors, like traditional chiefs and "project champions" were observed in this study to influence users' compliance with the 5% levy. These actors, which can be characterised as institutional entrepreneurs or bricoleurs (see also chapter 7), played important role in implementation of the 5% levy.

Strategies adopted by local actors to enforce implementation of the 5% contribution are not the subject of this chapter. Rather, the focus is to understand what facilitated and ensured compliance among users who had rejected payment of their share of the levy. Also, we examine the extent to which actors were capable of enforcing implementation of institutional reforms and the extent that this resulted from the influence of existing institutions and past historical factors. The next section describes how actors (especially traditional actors) through community-embedded institutions compelled collective participation among water users who resisted payment of the 5% levy. Whether this led to collective ownership and responsibility and translated into efficient management of the water system will be discussed later in this thesis.

5.2.2 The role of local actors: Promoting collective ownership and responsibility

The ability to sustain, maintain, modify or resist institutional change depends on the capacity of actors to enforce implementation (Brousseau et al. 2011). The presence of enforcers is thus key to ensure compliance in a policy change process. This study observed that though some users rejected the idea of the 5% contribution, traditional actors used their social position to employ community-embedded institutions to ensure compliance.

The chiefs were not given a formal role or responsibilities under the NCWSP. For instance, they were not stipulated to be part of the water and sanitation management teams (see also section 5.3). However, they could participate in the activities of the teams as an observers without the right to vote in key decision-making processes.

Despite this limitation, the chiefs' position as political and administrative leaders of the community enabled them to influence and enforce implementation of collective participation, as in the case of the 5%

contribution. Though most users in cases 1, 2 and 4 opposed payment of the levy, the chiefs and other influential local actors ensured compliance by invoking existing community-embedded institutions. In case 2, for example, access to funeral rites for citizens was tied to payment of the 5% levy. In other words, each household had to pay its share of the 5% levy before chiefs and the funeral committee would grant land for the affected household to bury its dead. Interviews revealed the power of this enforcement means:

> It was a quite difficult moment for me; they [the chief and the funeral committee] refused to give me the approval to get the land to bury my mom, because some of my siblings had not paid the water levy. Everyone in my family had to fulfil their part of the 5% levy before we had the approval to get a portion of land to bury our mom late in the night. It was so disgraceful. I still remember the embarrassment we went through as family members. I still remember the pain (Group interview respondent, case 2, Kyerkor, 5 June 2015).

The practice of denying family members land for the burial of dead relatives was to prevent free-riders and ensure the collective action that was deemed necessary to propel development:

> Kyerkor community has high communal spirit, given that decisions taken collectively are not to be violated. To ensure compliance we put in place some measures to deter defectors. These are part of practices and means to ensure citizens comply with rules. Recently when we wanted electricity in this township we applied the same rule (DA member, case 2, Kyerkor, 7 June 2015).

Similarly, in case 1b traditional actors and other local leaders[3] played a major role in ensuring compliance. Like in case 2, defaulters were denied land to bury their loved ones. Nonetheless, in case 2, traditional actors expanded the network of those required to pay the 5% levy to include not just those actively residing in the community but also citizens living in big cities and abroad:

> We expanded the network of those that must pay the levy to include those staying abroad and in the big cities. The argument is that those outside the community occasionally visit the community. Once they are here, they will use water and, therefore, they must also contribute, irrespective of their

> place of residence (Interview with traditional chiefs and elders, case 1b, Asuase, 29 May 2015).

In contrast to the above, in case 4, the 5% levy was applied through the chiefs and other government organisations, such as the police and the courts. Defaulters were served a summons to appear before the court:

> Each section had a water committee in charge of collecting the levy. If you refuse to pay they report you to the police and [you are] subsequently taken to court to demand payment. The inclusion of the courts put a lot of fear in people and made everyone pay (Women's focus group, case 4, Juaso Obogu, 9 August 2018).

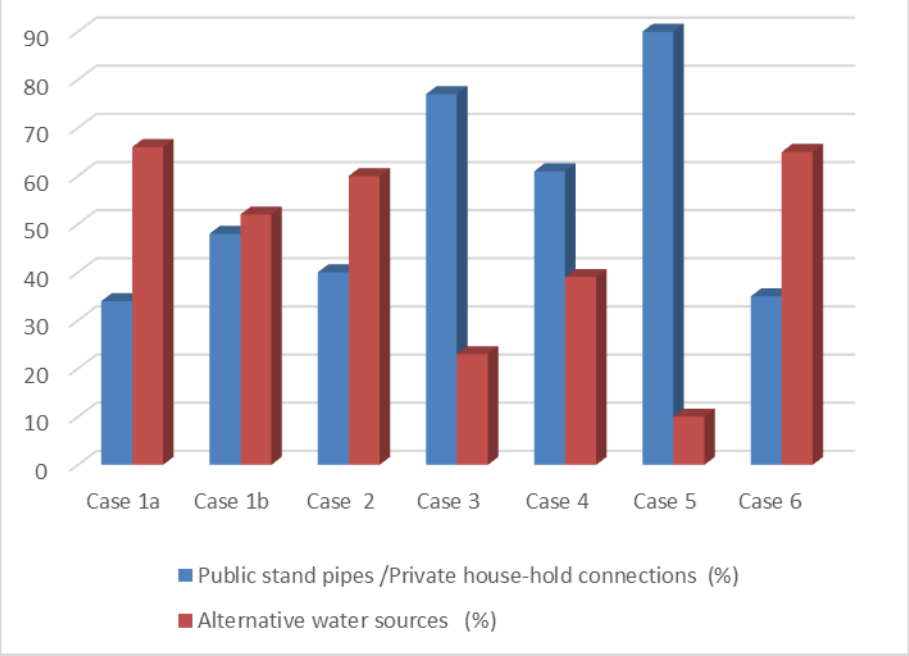
In sum, we can conclude that users complied with the 5% contribution out of fear or injustices that they would face if they defaulted on the collective commitment. From the evidence gathered, however, enforcement of the 5% contribution does not seem to have promoted collective ownership and responsibility, as assumed under the NCWSP.

Contribution of the 5% levy may not have translated into community ownership and responsibility for the future maintenance of their water system. However, this study found that shame and the stigma of forfeiting land rights to bury loved ones, or fear of being locked in prison, motivated users to pay the levy (cases 1, 2 and 4). An urgent need for water (cases 3, 4, 5 and 6) did instil an urgency to pay, but even in these cases, there is little indication of a willingness among users to take ownership and responsibility for the water projects provided.

Evidence of a lack of ownership among users and their failure to take responsibility for their water system was clearly demonstrated by users' refusal to participate in water-related activities. For example, there was a lack of participating public at durbars, and few were willing to take up water-related positions. According to survey results, communities with alternative water sources (cases 1, 2 and some parts of case 4) continued to rely on these alternative sources for their daily supplies (figure 5.1). Such practices made it difficult for water actors to break even, as lower patronage raised the unit cost of water. Yet, the water systems in communities with scarce water resources (case 3 and some parts of case 4) were overstretched due to increases in population. Moreover, the tariffs established were too low to allow for system upgrades and expansions to cover newly developed localities within the communities. This meant that most users

in newly developed localities had to rely on unsafe sources for their daily water needs.

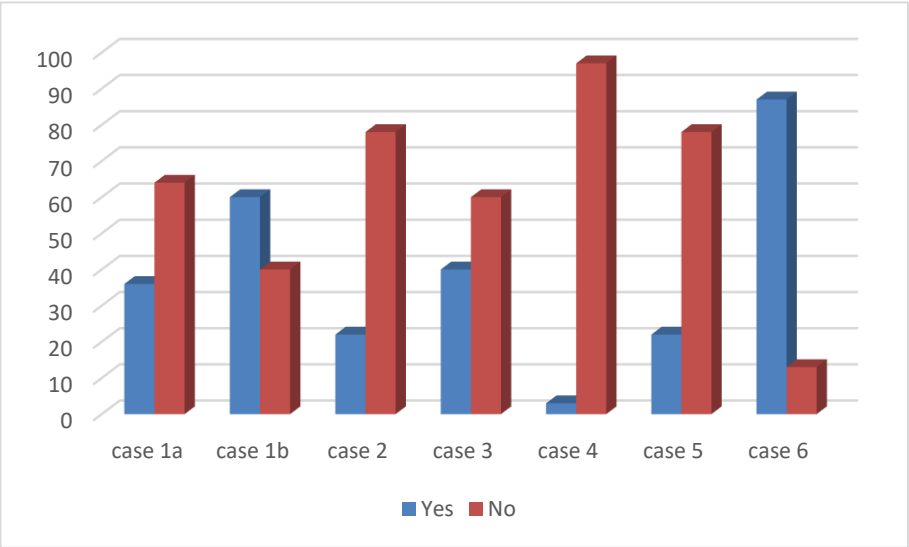
Figure 5.1
User dependence on public standpipes or private household connections compared to alternative water sources



Source: Author

Evidence further shows that users did not take part in decision-making and were not consulted on key decisions confronting the water systems. Lack of knowledge and information about the NCWSP may explain users' apathy towards water-related activities. Survey results presented in figure 5.2 indicate that most users indeed had little knowledge and information about water system governance, though such knowledge and information was to empower them to play their roles effectively.

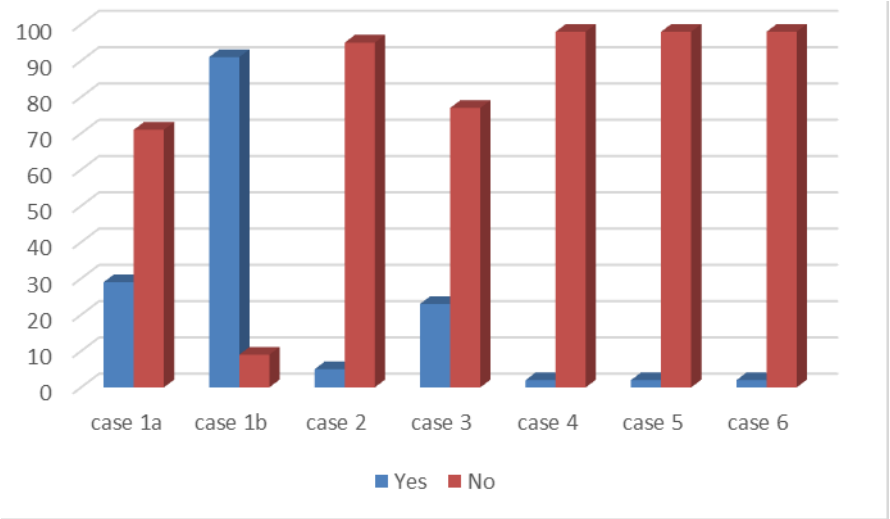
Figure 5.2
Users in possession of sufficient information to understand and play their role in water facility governance



Source: Author

Community members appear to have done little to hold local water actors accountable for their activities. Providing public accounts of the financial and technical status of the water system was a key institutional arrangement put in place to ensure transparency among local water actors. However, survey results indicate that, with the exception of case 1b, public accountability was virtually absent (figure 5.3).

Figure 5.3
Users' knowledge of public accounts issued by water actors regarding water system technical and financial status



Source: Author

Community members may have been ignorant of their roles and responsibilities in demanding compliance with accountability standards. Or they may have lacked the resources (e.g., power and influence) to ensure compliance from water actors. If users were aware of their roles and responsibilities, unequal power relations and social structures may have constrained their capacity to demand compliance. The question of unequal power relations raises another important issue, discussed further in section 5.3, which is the chiefs' involvement in the various new institutional arrangements, particularly the formation and activities of the water and sanitation management teams.

5.2.3 Formation of water and sanitation management teams

So far, this chapter has examined mainly how users interpreted the idea of the 5% contribution to the water supply facility and the practices emerging from their interpretations. It also investigated local actors' employment of community-embedded rules to ensure compliance.

This section looks at the reliance of powerful traditional actors on community-embedded institutions to meddle in the formation and activities of the water and sanitation management teams.

As described in chapter 4, institutional arrangements under the NCWSP required creation of new groups, specifically, water and sanitation management teams. These new entities existed side by side with traditional political structures. The new institutional arrangements excluded traditional actors from active participation in these new structures, though traditional actors were highly influential in grassroots governance. Traditional actors could participate as observers in the water and sanitation management teams, but they had no right to vote. Despite these limitations, this study found that the chiefs wielded substantial influence on and interfered with the composition and activities of the management teams. For example, in some cases they dissolved water and sanitation management teams, or meddled in their day-to-day management of the water system.

In case 2, for example, chiefs replaced members of the water and sanitation management team[4] with their own representatives who were loyal to both the traditional actors and the ruling government. These new members were perceived by the community to be cronies of the chiefs, who would allow the traditional actors' access to and control over management of the water system. Interviews with key informants[5] confirmed this observation:

> We were perceived as sympathisers of the past government. As a result we will sabotage the new government. So, the chief together with some powerful people in the community decided to appoint new members that would support the chiefs and newly elected government (Informant, case 2, Kyerkor, 4 June 2015).

It is surprising that although the water and sanitation management teams were supposed to be apolitical, chiefs and politicians nonetheless treated membership as a political appointment, hence justifying their continued interference. This finding supports the conclusions of other studies, such as Fuest (2006). That author found similar interference of chiefs and politicians in the composition of water and sanitation management teams after the 2004 general presidential and parliamentary elections in Ghana.

In case 4, the chiefs replaced members of the water and sanitation management teams after complaints by users dissatisfied with the team's performance. Both men's and women's focus groups revealed concerns about the poor performance of team members and allegations of corruption and mismanagement of the water system. They had called for the members to be replaced with more competent and dedicated functionaries:

> The previous water team did not provide public accounts of their financial and other activities. They must provide an account to us on how they use the revenues accrued from selling water to us. The water belongs to us, so we have the right to know how our money is utilised. Also, they had overstayed their term, and therefore we pushed for their dissolution by complaining to our chief to take action (Women's focus group, case 4, Juaso Obogu, 9 August 2015).

In this case, the decision to replace the water and sanitation management team was made collectively by the chiefs and community assembly members.[6] The chiefs were perceived as arbitrators responsible for ensuring peace and taking the lead in resolving conflicts. These expectations stem from existing cultural practices, which legitimise interventions by chiefs in water activities. Various interviewees provided justification for the chiefs' interference in water and sanitation management team activities:

> We had to dissolve the previous water team and select people that everyone in the community including us [chiefs] can trust. The former team was not transparent and accountability to the community was very poor. As leaders in the community, we must ensure that the MWST [water and sanitation management team] is following the rules. It is our duty to make things right (Interview with traditional actor, case 4, Juaso Obogu, 10 August 2015).

Other evidence points to a perception among some water actors that the chiefs and local elites replaced members of the water and sanitation management teams with their own favourites for nefarious reasons. Indeed, not all community members supported the chiefs' interference in the teams' membership:

> The chiefs and MWST [water and sanitation management team] are part of the rot. In our last and only public meeting, we realised that the chiefs together with members of the MWST have borrowed or taken money from

> the water accounts for their personal use. Changing the membership is a strategy in order to reduce the tensions and rot that is visible to everyone but we cannot speak-up due to fear and intimidation. The new members are still reporting to the traditional actors but not to us so what has changed (Group interview, case 4, Juaso Obogu, 7 August 2015)?

In case 3, a large number of water and sanitation management team members resigned from their positions, which justified the chiefs' steps to reconstitute the team. The traditional actors appointed new members to fill the vacated positions. As required under the NCWSP institutional arrangements, selection and appointment of management team members was to be participatory, and include all members of the community, facilitated by the DA. Notwithstanding this provision, the chiefs were observed as taking advantage of the situation by appointing their own representatives to the vacancies.[7] Evidence gathered indicates that the chiefs appointed interim members from whom they had received favours in the past, and then opposed the establishment of a new water and sanitation management team when the need emerged:

> The traditional actors were comfortable with the interim WSMT [water and sanitation management team]. They had control and were involved in every decision in the day-to-day management of the water system. We are not allowed to use revenue from the sale of water for non-water and sanitation related activities. However, we know that the WSMT financed the activities of the chiefs, irrespective of whether they fell under water and sanitation activities or not (Water and sanitation committee member, case 3, Wiamoase, 30 July 2015).

Town council members did make numerous attempts to effectuate participatory processes in electing new water and sanitation management teams in the following year.[8] However, the chiefs resisted such attempts until the district administration stepped in to reinstate the process, in line with the NCWSP guidelines. Likely, the chiefs were comfortable with the interim water and sanitation management team because their economic desires were being satisfied. As long as the water system continued to operate and provide water to residents, no new, elected water and sanitation management team was considered necessary.

In contrast to cases 2, 3 and 4, chiefs' interference, in the activities of the water and sanitation management teams was low in cases 1, 5 and 6.

For example, in case 1, the chiefs encouraged the water and sanitation management team to serve another term after its first term ended:

> It was announced at a community meeting that the MWST [water and sanitation management team] term had ended and those interested should apply. However, the entire community unanimously agreed that the current team continue for another term. Most people were satisfied with their work (System manager, case 1, Nyamedom, 25 May 2015).

The wording of the above comment is ambiguous. There are other possible explanations for the lesser interference by the chiefs in the water and sanitation management teams' activities. The current study found that in case 1 the chiefs had a good relationship with the water and sanitation management team. The team consulted the chiefs on all major issues confronting the water system. In short, the chiefs in case 1 were involved in key decision-making processes and, therefore, had fair knowledge and information on the day-to-day running of the water system. Further interference in the activities of the water and sanitation management team was unnecessary.

This behaviour of the traditional actors raises an important proposition found in the policy implementation literature, that is, implementation is smoothened when information and knowledge about a policy or programme are clear to interested agents and when leaders are supportive of the policy or programme. Traditional actors' knowledge about the day-to-day running of the water system made it unnecessary for the chiefs to interfere or disrupt the management team's activities.

In case 6, the water and sanitation management team's more cordial relationship with the traditional actors, compared to case 5, rendered the chiefs' interference with water and sanitation management activities unnecessary. Evidence suggests that the strained relationship between the water and sanitation management team and the chiefs in case 5 was due to mistrust between the two actors. Notwithstanding their differences, the chiefs were reluctant to interfere in the activities of the water and sanitation management team, due to the reliance of social relationships on trust and peaceful coexistence. This study could not gather enough evidence to really understand the behaviour of the chiefs in case 5 and its consequences for the management team's activities. This was due to the short length of time that the water system had been operational (it was just a

year old[9] at the time of the research). For comparative purposes, the water system in case 1 was more than three years old.

The above narratives indicate that the chiefs' motivations influenced their acceptance of or opposition to the composition and activities of the water and sanitation management teams. Economic and social motives influenced the extent to which the chiefs interfered. As noted earlier, policies that compromise and threaten the power and legitimacy of existing actors are less likely to be accepted; policies that reinforce actors' legitimacy and authority are more likely to receive support and acceptance (Cleaver 2012; Cleaver et al. 2014; Campbell 1997, 2004). Similarly, as established in this study thus far, if economic advantages of local actors, such as the chiefs, come under threat, these actors are likely to resist new institutional arrangements, for example, replacing water and sanitation management team members with own representatives who will succumb to their demands.

It is important to note that it was not only the chiefs who resisted or interfered with the composition of the water and sanitation management teams. Other local actors who had been influential in the earlier stages of NCWSP implementation became members of the water and sanitation management teams or water personnel. Similar to what was observed among chiefs, these influential actors or "project champions" (to borrow Andrew Matt's 2013 term) had disproportionate control over the management teams' membership and activities. This control and capture of the management teams by project champions was observed in all cases, but was most pronounced in cases 4, 5 and 6. In cases 5 and 6, for example, a few members of the water and sanitation management teams who had been "project champions" effectively dictated water activities, with the rest of the members largely disregarded. Although project champions' role was less dominant in the rest of the cases, the voluntary nature of the work of the water and sanitation management teams acted as a general disincentive, making the majority of members rather inactive. In all six cases , we observed that a few management team members controlled water activities.

In summary, this research found variation in how the 5% contributions were implemented and how the water and sanitation management teams were formed and conducted their activities. First, implementation differences were found to be associated with the local social and institutional setting within the beneficiary communities. The local setting largely

determined how local actors defined their problems and the steps they took to resolve challenges emanating from pressure for technological and institutional change. Secondly, community members' inadequate knowledge and information about the NCWSP partially explains the differences found in implementation. Thirdly, differences in the physical context, particularly local topography and access to water resources, directly influenced actors' choices and preferences. Fourthly, the extent to which a particular idea threatened or reinforced influential local actors' legitimacy and powers informed their actions to either resist or support new institutional arrangements for the governance of rural water facilities.

Notwithstanding the above, a key question remains unanswered: To what extent did implementation of the NCWSP lead to institutional change? Did the project succeed in making water users active participants in water system management, willing to contribute to the future operation and maintenance of their system?

5.3 Discussion

This chapter has sought to understand implementation of the 5% contribution and formation of the water and sanitation management teams. The 5% contribution was applied differently in the six cases studied, and formation of the water and sanitation management teams similarly varied.

On the question of what accounts for this diversity in implementation, our findings suggest that the absence of information on the NCWSP was a main trigger for implementation differences. Some beneficiary communities misunderstood the idea behind the 5% levy, conceiving it as a means for state officials to cheat water service users (cases 1, 2 and 4).

Inconsistencies in implementation of the 5% levy between neighbouring communities seemed to justify users' allegations of wrongdoing and their reluctance to comply with the new institutional arrangements. Further observation, however, suggests that physical characteristics and the extent to which beneficiaries had access to alternative water sources also informed users' choices. As shown in this chapter, those communities that rejected the 5% levy had access to alternative water sources, hence making the new water project and expected institutional changes of little concern to them.

However, communities without adequate alternative water sources (case 3) embraced the idea of the 5% contribution and complied with less

resistance. Evidence suggests that it was this urgent need for water that propelled many users' final choices and actions. Furthermore, users in cases 1, 2 and 4 complied with the 5% levy due to fear and stigma attached to being denied land to bury loved ones. Survey results show that the majority of users were ignorant of the rationale behind the 5% contribution. Moreover, they were unaware of the rules and their own responsibilities with regard to the water system. It would therefore be difficult to assert that compliance with the 5% contribution indicates a collective sense of ownership and responsibility for the water system, and empowerment of users to hold local water actors accountable for their activities. The results of this study, rather, confirm observations from earlier research that found no direct relationship between community contributions and collective ownership and acceptance of responsibility for covering future costs of operating and maintaining the water system (Bacho 2001, Fuest 2006).

We also demonstrated that local actors' capacity to resist or support the new institutional arrangements, particularly the 5% contribution and participatory formation of the water and sanitation management teams, relied on influential local actors invoking community-embedded institutions. This finding is consistent with the conclusions of earlier studies and suggests that institutions expressed through rules, social norms and cultural beliefs influence actors' interpretation and understanding of events. Notwithstanding these constraints, these pre-existing institutions also provide actors means for resisting, accepting or modifying institutional arrangements (North 1990; Hodgson 2006; Campbell 1998, 1997, 2004).

Most chiefs embraced the idea of the 5% contribution, as it was consistent with local values and the community practice of encouraging collective action to propel development. The 5% contribution appeared similar to practices used in the past to finance and support other community-initiated projects. Nonadherence to the 5% contribution was considered unacceptable, as it challenged norms and cultural values which frown on opportunism, cheating and any shirking of community responsibility (North 1990).

As demonstrated, the chiefs' ideologies and values influenced their interpretation of the NCWSP principles, which they translated into their support and acceptance of the 5% contributions. By ensuring that residents complied with the 5% levy, the community gained access to improved water infrastructure. The net effect was to enhance the chiefs' image and reinforce their powers as leaders of their community. Gaining

access to new water infrastructure also boosted the chiefs' social standing and identity among their peers in neighbouring communities. A modern water system was associated with innovation and power, to which not all communities had access due to the competitive nature of the process of acquiring a water system project. Most chiefs supported implementation of the 5% levy because it confirmed their own role and responsibility as an important development broker. It was therefore understood to fall to these traditional leaders to ensure that development advanced under their leadership.

Though some users were forced to contribute to the water project (cases 1b, 2 and 4), their attitude towards collective ownership and responsibilities was no different from that of users who gladly complied. With regard to participation in water management activities, similarly low levels of participation were found in all of the cases: those in which the 5% contribution was paid via the Members of Parliament common fund (cases 5 and 6), those supported by external actors (case 1b), and those who voluntarily paid the contribution (cases 3 and 4). Most users were apathetic towards water activities, while unequal power relations within the communities constrained actors' ability to demand compliance from water actors and thus to fulfil their formal roles and responsibilities.

Contrary to expectations, the chiefs perceived establishment of the water and sanitation management teams as a threat to their own authority and control over water-related activities. This explains their resistance to the free election of water and sanitation management team members, as apparent in cases 2, 3 and 4. In cases 2, 3 and 4, chiefs resisted formation of water and sanitation management teams because they perceived the teams' functioning as a threat to their own leadership role in the community. These chiefs replaced the elected team members with their own representatives as a way to reinforce their own authority and control over water-related activities. The practices of these chiefs corroborate the idea of North (2005) who argued that institutional change becomes difficult if proposed changes run counter to existing belief systems or threaten current leaders (North 2005, Prado and Trebilcock 2009). In circumstances where current beliefs exist side by side with proposed new institutions, modifications to the new institutions become inevitable or change is rendered largely ineffective.

Considering the way water resources were governed in the past (see chapter 4), the existence of the water and sanitation management teams

alongside traditional structures can be construed as a threat to the legitimacy of the chiefs. In contrast to the findings in cases 2, 3 and 4, the current research found no evidence of traditional actors' interference in formation of the water and sanitation management teams in cases 1, 5 and 6. The chiefs in these latter cases perceived the management teams as an extension of their own political and administrative structures. Hence, they saw no reason to interfere in the teams' activities or membership. In short, the activities of the teams were incorporated and entangled with the everyday practices of the chiefs. The relationship between the chiefs and the water and sanitation management teams therefore became blurred. For both actors, the most important thing was that their activities be in the interest of the community as a whole. This finding is consistent with other research, which found that when pressure for institutional change affects the current distribution of resources powers struggles are likely to arise (Campbell 2004).

These findings will help us to understand the role of institutional entrepreneurs, elaborated in chapter 7. Their capacity to resist or to renegotiate new institutional arrangements is embedded in their command of and access to resources. The findings here further enable us to appreciate the role of existing local institutions in processes of institutional change. The chiefs' position of social and political leadership, in some cases, provided them the authority to justify invocation of their own rules to replace the established process for forming the water and sanitation management teams. Elsewhere, the chiefs employed community-embedded institutions to ensure that users complied with the 5% contribution, as required under the NCWSP.

The actions of these chiefs in support of implementation of the 5% contributions, however, contradict findings from previous studies, which argue that institutional change becomes counterproductive when policymakers ignore interconnected institutions and organisations (North 2005). Even though the above assertion is consistent with the actions of the chiefs in interfering with the composition of the water and sanitation management teams in cases 2, 3 and 4, we found no interfere by chiefs in the composition and activities of the management teams in cases 1, 5 and 6.

These findings must nevertheless be interpreted with caution. The rationale behind the 5% contribution was not just to financially offset the cost of the water project, but more importantly, to ensure collective participation of the beneficiary community in the water project. This,

according to supporters of community management, should translate into efficient operation and maintenance of the water system. Evidence gathered here, however, indicates that most chiefs supported implementation of the 5% levy as a means to ensure that their community gained access to a reliable source of potable water. Though not explicitly stated, the notion of collective responsibility and participation was not a priority among the chiefs and other influential actors.

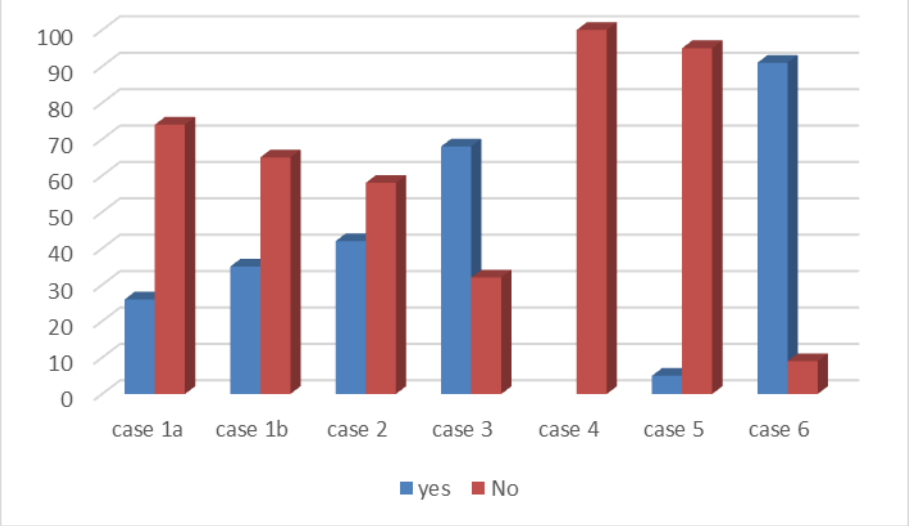
On the question of whether we can describe the actions of those involved as a process of institutional bricolage, these findings suggest that the ability of the chiefs to rely on their social position and community-embedded institutions to frustrate or promote institutional arrangements under the NCWSP is consistent with the concept of institutional bricolage. Chiefs' ability to initiate change was dependent first on their social position, which provided them the resources to activate their agential capacity. Among these resources were existing customs and cultural practices that legitimised the chiefs' actions. Consistent with the concept of bricolage, this study construes the actions of the chiefs as a response to the challenges that arose in implementing the NCWSP. While most of these chiefs had the power to resist or to accept institutional changes, we found that the attitudes adopted differed in each of the six cases studied. This observation is consistent with Cleaver (2012, 2002), who maintained that adopted practices or institutional arrangements must be familiar and fit within the accepted logic of practices and social relations. This, according to Cleaver, gives the newly adopted practices legitimacy and acceptance and facilitates the exercise of authority.

The ability of the chiefs to use their position to influence institutional arrangements, as shown in this chapter, has important implications for the path dependence of institutional change. Elite control and capture of water activities can be a major factor in rendering institutional change slow and path dependent. This study found that in most of the case study communities water-related activities were controlled by a few local actors, primarily chiefs and local water actors (members of the water and sanitation management teams and water personnel).

One issue that emerged from the case studies is the dearth of accountability. A key aspect of the institutional arrangements under the NCWSP is a yearly reportage to the public accounting for water expenditures and the technical status of the system. Knowledge of any such reports was rare in the six cases studied (see figure 5.3). In cases 1 and 3, some

accountability reports were available. Nonetheless, even here participants said they were unable to fully scrutinise water actors' activities, due to the absence of important documents, such as bank statements and details of expenditures. In some cases, practices were observed to have changed, with water actors now reporting only to the chiefs instead of to the community as a whole (e.g., in case 4). In cases 2, 5 and 6, there was little evidence of any form of community meeting for accountability purposes.

Figure 5.4
User involvement in decisions on water and sanitation management team composition



Source: Author

Taken together, these observations support a key criticism of community management and community participation approaches in water management; that is, water governance cannot be separated from power and politics (Rusca and Schwartz 2014, Harvey and Reed 2007). As shown in this chapter, unequal social power relations and "economic rank" (Elwert and Bierschenk 1988: 102) determine who can and cannot make decisions. Unequal power relations implies that community members may be unable to question local elites about their activities and the decisions they make – even if in some circumstances these activities and decisions have been

detrimental to the efficient management of the community water system. My survey results confirm that members of the community were not involved in decisions affecting their water system. For instance, users did not participate in appointing water and sanitation management team members, overseeing expenditures or adjusting tariffs (see figure 5.4).

The assumption of a unitary community in possession of the social and human capital needed to propel collective action is misleading. Indeed, structural and resource constraints were common among the water actors studied, challenging coordination and cooperation in water activities. Evidence derived from our cases confirms that the communities studied were heterogeneous and stratified along the lines of wealth, ethnicity, class and political affiliation, making collective action less straightforward (Lund and Saito-Jensen 2013: 3). Some scholars maintain that the absence of efficient local government structures, such as for information sharing and communication, alongside the unavailability of necessary staff at the local government level, may overburden implementing actors (Feachem 1980: 22). The extra responsibilities and costs that accompany oversight of community management inevitably undermine water-related activities.

Finally, the lack of incentives and the voluntary nature of membership in the water and sanitation management teams accords with a criticism raised in community participation scholarship. That is, it explains why just a few local water actors have captured and control water activities (Cleaver 1999, 2012; Gaventa 2004; Gbedemah 2011).

These obstacles have hindered achievement of the NCWSP objectives, again rendering institutional change slow and path dependent. The above results, however, should be interpreted with caution. It is possible that respondent biases may have affected our findings. For instance, actors may have sought to justify their lack of action by claiming an absence of knowledge about the institutional arrangements. Nevertheless, at least two of this chapter's findings are undoubtedly significant: (i) institutional change has been slow and (ii) the NCWSP has been unsuccessful as a tool to promote community ownership and responsibility. Implementation of the programme has not translated into the efficient management of small town and rural water facilities in any of the six cases studied.

5.4 Conclusion

This chapter provided evidence that actors' interpretations of the NCWSP differed in each of the six cases studied. These differences explain the variations found in programme implementation. Inadequate information and knowledge about the NCWSP and the extent to which a new water supply system was urgently needed affected actors' choices and the practices that emerged. In addition, the extent to which the new institutional arrangements introduced under the NCWSP were consistent with local values, worldviews and everyday practices influenced key local actors' capacity to support or resist institutional change.

The construction of a new water supply system was dependent on the role of the chiefs, particularly their support for and enforcement of the 5% community contribution. As a primary enforcer of community rules, the chiefs used the 5% contribution as an opportunity to reinforce their own power within their community. Contrary to the intention of the NCWSP, some chiefs perceived establishment of a water and sanitation management team as a threat to their own leadership role as a development actor. They thus rejected the community-based, participatory election of these management teams, in some cases replacing them with people and arrangements that better served their own needs. Clearly, NCWSP implementation was interrupted by the chiefs' perception of themselves as the main actor in charge of development of the community. Any activities that conflicted with the chiefs' roles and responsibilities thus became subject to resistance and renegotiation. However, NCWSP aspects that enhanced the identity and image of the chiefs were promoted and maintained, in line with the existing institutional arrangements.

In all six cases, the motivations and logic behind local actors' choices and practices determined the path of NCWSP implementation. The cultural values and norms embedded in everyday practices provided the means which enabled local actors to exhibit agency. Taken together, these factors rendered institutional change in the governance of small town and rural water supply slow, in contrast to the expectations of the NCWSP.

Notes

[1] Demand for a water facility was to be operationalised through payment of a 5% contribution to the capital cost of the system. This was a necessary condition to enable a community to benefit from a water project.

[2] Members of Parliament can receive 4% of the total common fund allocation for purposes of initiating development projects in their constituencies (ghanamps.com/news-events/details).

[3] Funeral committee members and lower governance actors.

[4] This incident occurred after a change in government in the 2008 presidential and parliamentary elections.

[5] This key informant held a position in the dissolved water and sanitation management team in case 2.

[6] Assembly members liaison between the local government administration (the DA) and the community. They are elected and appointed and play a critical role in community development. Assembly members participate in the work and activities of the DA, such as attending meetings and contributing to decision-making (A Guide to District Assemblies on Ghana).

[7] The interim water and sanitation management team was made up of the three continuing members and two new staff: a system manager and an accountant. The interim team operated the water system for six years.

[8] Assembly members and unit committee members representing lower arms of government.

[9] At the time of data collection, the water system was just a year old and the first water and sanitation management team's term had not expired.

6 Renegotiation of Institutional Arrangements from Policy to Practice

6.1 Introduction

Chapter 5 concluded that local actors' capacity to resist or accept new institutional arrangements, specifically the 5% contribution and participatory election of the water and sanitation management teams, was dependent on the information they possessed on the NCWSP; the urgency with which a new water supply was needed; the extent that the institutional arrangements under the NCWSP were consistent with local values, worldviews and everyday practices; and the influence of local elites. This chapter examines how the local social and institutional context influenced local actors' capacity to manage their water supply system and the practices they adopted to manage the challenges that arose.

As discussed in Chapter 4, the NCWSP was deeply rooted in neoliberal thinking, originating as it did in late 1990 and promoted by the World Bank. The programme brought new institutional arrangements and decentralisation of administrative responsibilities in the water sector to lower government levels. The water and sanitation management teams and local water personnel were responsible for the day-to-day management of the water supply systems. The DAs and CWSA were charged with monitoring and supporting the water and sanitation management teams in carrying out their tasks (MLGRD 2010, Braimah and Kheni 2013). The new water supply facilities operated by one of two main management models: community-based management and private-based management (for a discussion of these see section 4.4).

This chapter is divided into three sections. Section 6.2 examines how local water actors managed their water system using the private-based management approach and emerging practices adopted to navigate the challenges that arose. Section 6.3 presents a similar investigation of water system management among water actors using the community-based

approach. Section 6.4 looks at practices adopted by water vendors to manage public standpoints under both management approaches. Each section seeks to answer four questions: (i) To what extent did actors' technical capacity, skills and access to information and knowledge about the NCWSP constrain or enable them to manage their water supply system? (ii) What practices or strategies have actors adopted to navigate the challenges they have faced in managing their water supply system? (iii) What motivational factors and logic have informed actors' choices and the kinds of practices adopted? (iv) Can we describe the practices and strategies of implementing actors (i.e., local water actors) as a bricolage?

6.2 Renegotiating institutional arrangements: From community-based to private-based management

As shown in numerous studies, local actors' implementation of externally set policies depends largely on the technical and institutional capacity of the implementers, the complexity of the technological innovations, local knowledge and information on the policy or programme, and the commitment of leaders (Rose 1993, Mukhtarov 2014, Campbell 2004). Moreover, implementing actors alter and modify institutional arrangements when constrained by the local social and institutional context. Whereas scholars are aware of actors modifying institutional arrangements, the motivations and logic driving actors' actions are not well understood. An investigation of actors' motivations could help us to learn why actors' make certain choices and take certain actions in particular contexts.

Chapter 4 suggested that communities make choices that are appropriate to their needs, such as in contributing towards investment costs for a water facility and assuming responsibility for future operations and maintenance. Yet, despite the above provision, this study found that the technical capacity of local actors was inadequate to successfully manage their water supply system, either by themselves or to delegate that responsibility to a private organisation. To bridge the technical capacity gap that became evident, actors in cases 5 and 6 decided to switch management approach from community-based to private-based management. Though local water actors had initially opted for community-based management, poor management of the water system forced state actors to intervene. The current study found that disparities between local water actors' actual capacity and their technical needs had a bearing on how they managed the

water systems (see also appendixes 12 and 13). In multiple cases, capacity gaps led to poor management and underperforming water services.

Under the NCWSP, all decisions related to water system management, including procurement of services from a private company, were to be initiated by the water and sanitation management teams. State actors, mainly the DAs and CWSA, were to facilitate and coordinate the teams' activities. In cases 5 and 6, however, serious deficiencies in the technical capacities of local water actors were recognised. To avert a total breakdown of the water systems, state actors[1] stepped in, concluding an agreement to change the management model, reassigning management tasks to a private service organisation. The private management option was to address the capacity gap faced by local water actors in managing their water system.

Such influence of state actors on the procurement process for private water system management services is inconsistent, however, with the given institutional arrangements. These mandated community participation in any such decision-making. An interviewee justified the state actors' intervention as follows:

> In 2014, our first external auditor hinted that Karaga water system [case 6] was not up to the task. The auditors warned us that if care was not taken, the system would collapse. Although we knew from the onset that the required capacity to manage the water system was lacking, we allowed them to select their preferred management option. We had to allow them to take decisions and fail rather than impose a management option on them. It was a painful decision but necessary if we have to put community participation in action. But looking at the current situation, we must take control (Interview with NORST personnel, Tamale, 27 October 2015).

Apart from controlling decision-making processes, this study found that some local practices differed from the set institutional arrangements for engaging the services of a private operator. For example, the services were outsourced to an existing organisation in the region (Pumptech), contravening the public procurement guidelines, which stipulated competitive bidding. Two rationales were used to justify the state actors' actions. First, a private organisation from the region was said to be better positioned to respond to local needs than an organisation from elsewhere. Secondly, a local organisation was considered to have the advantage of local

knowledge and greater familiarity with the challenges within the region than an organisation outside the region.

A worker from the Northern Region Small Town Water and Sanitation Project (NORST) described the state actors' actions as follows:

> We realised that advertising the proposed call for expressions of interest would lead to many contractors from the southern part of the country who do not have local knowledge. This would make it difficult for local private operators to qualify. We must also enhance the capacity of our private local water organisations. By controlling the procurement process, we can settle on firms that we can trust and are flexible, compared with the situation of dealing with more mature and experienced firms. Based on these reasons, we unanimously offered Pumptech[2] Limited the position. Pumptech, in our opinion, was the best candidate because over the years they were involved in the maintenance of small town water systems in the region. We can trust Pumptech to deliver to our expectations (Interview NORST personnel, Tamale, 27 October 2015).

Another reason for controlling the decision-making process was revealed in an interview with a staff member from the regional CWSA and NORST:

> We realised that direct management of the water system by the WSMT [water and sanitation management team] was inefficient making the need for an urgent solution crucial. We had to come together [the DA, NORST and CWSA] and act quickly to find a solution. Therefore, we started with a series of meetings, although we followed the guidelines for engaging private water operators. Our current situation and conditions in this region meant that we had to change things to suit our peculiar needs as a region (Interview NORST, 27 October 2015).

Other evidence shows that state actors also controlled what went into the agreement document between Pumptech Limited and the community. For example, (i) Pumptech was to retain staff recruited by the water and sanitation management teams, (ii) Pumptech was to train all existing staff, and (iii) staff were to sign a performance agreement against which they could be evaluated. One puzzling question is why state actors decided to negotiate with the private actor on the specifics of the agreement. On this, NORST and CWSA staff provided clues:

> Our decision to influence the process was to ensure that the private organisation is controlled and doesn't take advantage of the institutional and technical gap. The water system is quite new and therefore we need to safeguard the interest of the community (Interview with NORST and CWSA staff, 27 October 2015).

Another important finding is that 10% of the total revenue was set aside for monitoring and maintenance purposes. According to a representative of NORST, the aim of this arrangement was to safeguard water system functionality. In other words, it sought to ensure that the DAs and CWSA had access to adequate financial resources to monitor and coordinate management of the water systems:

> Although, we have finished the project, we have few resources which we think is important to enable us to bring these actors together [CWSA and DAs] to train them. This is necessary to beef up their technical capacity and not to allow the private sector to have a field day. CWSA and DA are the main teams responsible for monitoring the private operator. We have put aside 10% of total revenue to enable these actors to fulfil their core mandate without the usual difficulties of lack of financial resources that have bedevilled most local government organisations. Most projects never had financial support for monitoring purposes only. These are new which we, NORST, advised should be included in the contract. This will make the DA and CWSA not have excuses if they fail to monitor the activities of the private operator (Interview with NORST personnel, Tamale, 27 October 2015).

Apart from changes made by NORST, an interview with the water and sanitation management team pointed to additional changes implemented by Pumptech: (i) the commission for vendors was fixed at 10% instead of 20%[3] and (ii) the amount allocated for future replacement and expansion of the water systems was reduced from 20% to 10% of total revenue. When I asked state and local water actors about these revised provisions they appeared stunned by them and alleged that some of the changes were made by Pumptech without their knowledge. In my interview with Pumptech, they justified changes in the contractual agreement by the inadequate technical capacity and skills of local actors. This, they said, constrained their efforts to comply with the original institutional arrangements. These conditions, according to Pumptech, were unknown to them before they started implementation. They therefore had to make adjustments in the agreement to accommodate the challenges they faced:

> We realised a lot of challenges in the way the water system was being managed. The biggest challenge we faced was the local dynamics mixed with politics in the management of the water system. Secondly, there was the need to build their capacity, as most staff did not have the requisite capacity to manage the water system. For example, poorly kept records, revenue from the sale of water unaccounted for by vendors, mishandling and mismanagement of pumping water-to-water reservoirs leading to high electricity cost. As a private organisation, we need to break even and not make unnecessary losses. We therefore had to find alternatives (Interview with Pumptech staff, Tamale, 28 October 2015).

Implementation of the new institutional arrangements was thus constrained by institutional and technical capacity gaps among local water actors. Moreover, a lack of understanding and fair assessment of the institutional and technological changes frustrated local actors' ability to manage their water system. Under the NCWSP, the water and sanitation management teams were responsible for (i) recruiting personnel (financial, administrative and technical); (ii) monitoring and supervising water personnel (see also appendix 9); and (iii) making decisions on the day-to-day management of their water system. These requirements presume that the water teams have sufficient technical and financial knowledge. Otherwise, they would hardly be in a position to coordinate and supervise the water personnel or private organisations under their control. Not only did the water management teams have inadequate capacity to ensure proper monitoring and coordination, the job of the water management team member was not remunerated with a fair wage, leaving little to motivate members for their efforts. Members of the water and sanitation management teams received only an allowance for attendance at meetings, and even this stipend hinged on the availability of funds. The voluntary nature of the position and lack of remuneration explains why more technically savvy and administratively experienced persons failed to step forward to take up this role.

As becomes clear from these observations, the capacity required of local water actors did not correspond with the actual capacity available. This prompted state actors to intervene. Nonetheless, the motivations behind state actors' decision to step in merits scrutiny. Our observations suggest that, at least in cases 5 and 6, problems that arose in the operation of the water systems brought functionality concerns to the fore. To avert a crisis due to malfunctioning of the water systems, state actors took it upon themselves to step in and make decisions to ensure continued water flow.

It is important to note that private sector participation was an integral aspect of the NCWSP objectives. The state actors' interventions were consistent with the new institutional arrangements, which required communities with a population of more than 10,000 to employ the private-based management model as the preferred management approach (see also appendix 10). Communities with a population of more than 10,000 had a larger water system (this applied to our cases 3, 4, 5 and 6). A larger water system required more professionalism in its management, which was recognised to be lacking among local water actors.

The mismatch between the technical needs and actual capacities of local water actors was further exacerbated by a lack of continued training to enable local actors to execute their roles satisfactorily. All these challenges, taken together, made it very difficult indeed for local actors to manage their water system efficiently, making state actors' intervention necessary. State actors and Pumptech went so far as to modify the given institutional arrangements for managing the water systems under private-based management, to fit the communities' institutional and technical needs. Notwithstanding the changes made to the institutional arrangements for water system management in cases 5 and 6, a key question is whether the changes did in fact translate into the efficient management of the water systems. Did the state's and private company's actions improve the quality of water supply services? I return to this question in section 6.5. First, we explore how local water actors operated and managed their water system under the community-based management approach.

6.3 Modification of institutional arrangements: Renegotiating community-based management

This section looks at how local water actors in cases 1, 2, 3 and 4 handled the challenges they faced. As pointed out in the previous section, the commitment of implementing actors, the institutional and technical capacity of actors and the extent to which water actors had a fair understanding of and knowledge about the institutional reform programme were important driving forces for institutional change (Mukhtarov 2014, Dolowitz and Marsh 1996, Campbell 2004). These factors influenced how actors interpreted institutional arrangements for managing their water system, consequently informing actors' choices and practices.

For example, in cases 3 and 4 the water systems were to be placed under private-based management due to the size of the communities and the water system needed to serve them, as the populations exceeded 10,000 (see appendix 9). The technical requirements and specialisation needed to manage such a larger water system meant that community-based management was inadequate. Available evidence, however, shows that the water systems in these communities were in fact under community-based management at the time of this research.

Local mistrust of private organisations may explain why local water actors in cases 3 and 4 resorted to community-based management instead of private-based management. The general perception within these communities was that private organisations would not necessarily bring any specialised skills. Most private organisations were thought to be primarily concerned with how much they could get from the community through management fees, depriving the communities of revenues for future expansion of their water system. Local water actors therefore believed that the financial position of their water system would be threatened if they opted for private-based management. This justified their choice for community-based management.

Furthermore, small town and rural water supply systems were dealing with unrealistic tariffs and inadequate revenues from water sales, alongside higher than expected costs for water production. This left the financial situation of most water supply systems tenuous. Due to this ongoing situation, local actors came to view private-based management with suspicion and as riskier than the community-based model. This too justified local water actors' preference for community-based management, despite their own limitations in terms of technical and financial capacity and skills to manage the water system professionally.

Interviews conducted with water and sanitation management team members confirmed this finding:

> Most private companies take a huge percentage of total revenue. We have witnessed many failed private management in other neighbouring communities. In Wiamoase, water is scarce. This makes us vulnerable if we choose private management. For example, the private company will always find excuses to shirk their responsibilities when there is a major problem affecting the water system. The consequences and effect of such unexpected problems will not be felt by the private company, unlike us (Water and sanitation management team member, case 3, Wiamoase, 30 July 2015).

Interestingly, in case 3 state actors, that is, CWSA and the DA, also perceived private-based management as unnecessary. These state actors shared many of the perceptions of private organisations expressed by local water actors. This led them to prefer community-based management as well, so they did not compel water system actors in cases 3 and 4 to adopt private-based management. Evidence suggests that private-based management was unnecessary as long as the DAs were able to provide local water actors with technical and financial support and frequently monitored local water actors' activities. The matter thus appears to not be one of community-based management versus private-based management, but rather of getting local water actors the tools they need to manage their water system efficiently:

> It is only when the community is not committed and supportive that you opt for private management. The issue is that private-based management also comes with its own challenges. A huge percentage of the revenue goes to the private operator, and in a situation where the DA and local water actors do not have an understanding and capacity of how private-based water management works, the private water actors may take advantage of the institutional capacity gap. Wiamoase water issues are a sensitive matter we cannot take risks on. If we [the DA] take our roles seriously by monitoring and offering the needed support, local water actors are capable of managing the water system (DA staff, case 3, Agona-Ashanti Region, 2 August 2015).

Although local water actors in cases 3 and 4 had relatively better institutional and technical capacity, compared to the other cases, the large size of the water systems put substantial pressure on local actors to manage their system efficiently. In other words, the high capacity of the water systems, alongside the fast growth of the population in the beneficiary communities, challenged local water actors' capacity to manage their water system professionally. Poor financial records; water revenues unaccounted for; stealing and corruption; inefficiencies in billing and collection of water tariffs; traditional actors/chiefs' interference in the recruitment of vendors; and unpaid bills were some of the challenges that local water actors encountered.

Unexpectedly, evidence demonstrates that the technical and financial support given to local water actors was inadequate and that training was virtually absent and monitoring infrequent in the two water systems. To bridge the technical and financial support gap, local water actors instead

acquired knowledge and training from a network organisation called the Association of Small Town Water Operators (ASTWO) (table 6.1). Practices adopted by local water actors from ASTWO included the following: (i) new accounting software for managing the revenue and expenditure reports; (ii) performance agreement forms signed with vendors with two witness serving as guarantors; (iii) vendor commissions paid through the bank; (iv) continued training for all local water actors; and (v) water personnel required to keep a maximum amount of GH50 in the office, with the remaining balance to be taken to the bank.

Local water actors in cases 3 and 4 did acquire training from CWSA in financial reporting and related issues.[4] However, ASTWO encouraged its members to introduce greater professionalism to their accounting practices. For example, ASTWO encouraged its members to adopt different practices for financial reporting than those recommended by CWSA. Members' reasons for adopting the new ASTWO procedures were expressed by a local water actor as follows:

> The new accounting software developed by the association allows us to be efficient in the collection of water bills from our customers. We have about 450 private consumers and 26 public standpipes. The reporting format developed by CWSA demanded that we collect revenue from vendors daily. This is not an easy task and not feasible looking at the size of the community and number of vendors we have to deal with daily (Interview with water and sanitation management team, case 3, Wiamoase, 30 July 2018).

Justifying the need for small town water systems to adopt community-based management instead of private-based management, the ASTWO chairperson observed that the training of all local water actors would bridge the capacity gap. Local actors would then be able to independently manage their water system professionally. With the required institutional capacity developed, local water actors would not need to delegate the responsibility to a private organisation. On this, the chairperson of ASTWO had the following to say:

> Placing a water system under private-based management is not the best option. Past practices make it unattractive and a huge risk for small town water systems. In this community, Ejura, our population is over 30,000. Yet we are managing the system using the community-based option. There is an urgent need for members to be more proactive and look within themselves

to provide the training necessary to navigate through the challenges they face as water operators (ASTWO chairperson, Ejura, 28 October 2015).

Table 6.1
Historical development of the Association of Small Town Water Operators (ASTWO)

The Association of Small Town Water Operators (ASTWO) is a network of small town water operators located in various parts of Ghana. It was formed in 2005 as a measure to bridge the technical capacity gap among local water actors. The various water projects initiated under the NCWSP had unique and particular needs. However, the training provided was uniform, without variation to serve the specific needs and interests of each project (e.g., in terms of technological design and accessories). Frustration experienced by some system operators in the Ashanti region due to this lack of tailored offerings led to creation of ASTWO to bridge the gap. The technical and financial experiences and skills of members were pooled together and made available to one another to provide needed technical know-how. ASTWO has been active in providing training for its members. Local actors in cases 3 and 4 have benefitted from this training. These association initiatives fall outside the purview of the sector guidelines, which state training as the sole responsibility of state actors such as CWSA and DA units.

Source: Interview with the ASTWO chairperson, Ejura, 28 October 2015

It is important to point out that the inadequacies of the training on offer was the main reason for setting up ASTWO in the Ashanti region of Ghana (see table 6.1). Local water actors from cases 3 and 4 were members. In interviews conducted for the current research, ASTWO's chairperson asserted that local water actors needed to be innovative and free to change their approach towards managing their water system:

> The gap in capacity and other political influences makes our network important. Through our innovative skills we introduce new ways of doing things. For example, we train our managers to understand and appreciate certain features of the water systems. We organise a course for each category of staff, that is, accountants, technical operators and plumbers, focusing on the particular needs that will make them efficient. We look at the need before we offer training. This is necessary because no training has been organised by CWSA or DA since 2005. In a nutshell, the association looks within itself for skills and technical know-how, which we tap to train others to come up to the required level. Some are very good, and others are weak. The good help to bring the weak up (ASTWO chairperson, Ejura, 28 October 2015).

For example, as a measure to ensure accountability and reduce unnecessary interference by powerful local elites, in case 3 vendors sign a

performance contract for a year. That contract provides a basis for evaluating their performance:

> Vendors in the past were recruited based on their affiliation with powerful persons in the community. This made it difficult for past water operators to hold them accountable or dismiss them for poor performance. We as new water team are more professional in our roles and responsibilities compared to our predecessors. As part of restructuring the water system and reducing such unnecessary interferences, we decided to take up this new direction to avoid losses in revenue (Interview with water and sanitation management team member, case 3, Wiamoase, 30 July 2018).

In regard to case 4, this study could not gather enough evidence from state actors to explain why water management was under community-based management. Like case 3, this author's observations and interviews with local water actors suggest that the risk of losing revenues to a private organisation was a major consideration in the preference for community-based management:

> We do not receive the necessary support from the DA. We therefore have to figure things out by ourselves to manage the water system. As far as we know, we are on our own. Since the death of our last technical officer, we have been relying on the engineer from the neighbouring community at Juaso for technical support and assistance. Also, we get some support from the Association of Small Town Water Operators (Interview with water and sanitation management team member, case 4, Juaso-Obogu, 11 August 2015).

Whereas local water actors in case 3 introduced new practices for managing their water system, local water actors in case 4 were less innovative. For example, the water personnel in case 4 opposed the application of ASTWO financial software and other modifications to improve water system management. When asked why, water staff justified their decisions as follows:

> We do not understand the WSMT [water and sanitation management team]. They are always bringing new things differently from the way we did things in the past. We prefer to use the old way of accounting for our revenues taught by CWSA. The new software is complicated. We do not understand how to work with it (Interview with water personnel, case 4, Juaso-Obogu, 11 August 2015).

The actions of the water personnel support the idea that changes become path dependent when proposed changes reduce or threaten the powers of existing actors or distribution of resources (North 2005, Prado and Trebilcock 2009). In case 4, water personnel felt threatened by the innovations suggested by ASTWO for managing financial records, hence, their resistance. They preferred to stick to their old practices.

Even though local water actors in cases 1 and 2 also adopted community-based management and were confronted with technical challenges, local water actors did not introduce new institutional arrangements comparable to those introduced by local actors in case 3. We will now focus on the differences between cases 3, 5 and 6 and cases 1, 2 and 4.

There are several possible explanations for the differences in local actors' behaviours. First, the size of the water systems presents particular challenges, and local water actors do not always have the capacity to manage larger and more complex systems. Secondly, the scarcity of alternative water sources and local water actors' urgent need for a new water source motivates them to work hard to navigate the changing institutional arrangements and challenges they face in managing the water system, as shown in cases 3, 5 and 6.

Actors were driven by economic motives in cases 3, 5 and 6. They sought to ensure efficient management of their water system. They introduced greater professionalism into water system management, as they were keen to avoid a total system breakdown. This finding mirrors those from earlier studies, and suggests that actors will modify institutional arrangements to achieve a substantive goal; particularly, to reduce transaction costs, to manage labour relation problems or to improve the quality of services (Campbell 2004).

Similarly, local water actors recombined existing institutional principles and practices to address challenges they faced in managing their water system. Specifically, they did this to find solutions to high operational costs, low revenues, large amounts of water revenues unaccounted for by vendors and capacity-related challenges in cost-effective operation and management.

Unlike in cases 1 and 2, alternative water sources were less available in cases 3, 5 and 6, implying that a breakdown of the new water supply facility would have a devastating effect on users. Difficult access to alternatives, however, put pressure on local water actors to find low-cost management

strategies that would ensure continuous functionality of their water system. Community members in case 4, which was similar to cases 3, 5 and 6 in relation to population and water system size, further confirmed the urgent need for water as a driver of institutional change. First, the availability of alternative sources in some parts of the case 4 community reduced pressure on some local water actors to modify institutional arrangements. Secondly, water personnel there rejected innovations proposed by ASTWO, because some of them were benefitting economically from the current inefficiencies in water system management.

Taken together, these results suggest that even though the technical capacity of actors may have driven changes in institutional arrangements, these were insufficient to drive actors to innovate. The physical characteristics and nature of the water resources available and the logic behind actors' choices and practices were also important in determining the actions that actors ultimately took.

6.4 Renegotiating institutional arrangements: The case of water vendors

So far, this chapter has focused on practices adopted by state and local water actors to manage their water systems. This section discusses practices water vendors undertook to fulfil their duties. Vendors are defined as the people in charge of managing the public standpipes. They had two main responsibilities: (i) to control the opening and closing of public standpipes and (ii) to collect money from users when they fetched water. Revenue collectors then picked up daily sales earnings from the vendors. In return, the vendors received a 10%-20% commission on the amount of water sold.

The NCWSP introduced new technologies that made the handling of water more hygienic and easier than with the boreholes and hand-dug wells previously available. Notwithstanding these advantages, the new technologies used in the small town water supply systems brought technical complexities. For instance, a water meter was mounted onto all public and private taps to measure water distribution to each. This meant that vendors had to have some basic education, as they had to be able to read and interpret the meter, and thus account for all water sold. Evidence shows, however, that the educational level of the majority of the vendors was inadequate to implement this task. This led to tension and conflict

between the vendors and the revenue collectors, as discrepancies often arose between expected earnings and actual earnings from water sales. The vendors felt that the revenue collectors were taking advantage of their illiteracy to cheat them, while the revenue collectors were under the impression that the vendors were feigning ignorance, using illiteracy as an excuse to shirk their responsibilities and cheat.

Focus group discussions with vendors confirmed these perceptions:

> We have not been trained, especially the new ones. All that we were told is how the water meter[5] works. But as you know, most of us have not been to school, so we do not understand how it works which is a worry for most of us. You see, when the revenue collector comes to collect the money we cannot challenge them. They know more than us. So if even he is cheating us it is difficult to know (Focus group discussion, case 3, Wiamoase, 30 July 2015).

Vendors in case 4 shared similar sentiments. They too pointed out that their inability to read and write made them vulnerable to revenue collector deception:

> With the exception of the vendor at the standpipe closer to the Presbyterian Church, most of us are not trained. Most of us have difficulty in understanding how the water meter works. As a result, we agreed to fixed daily sales. Before that, there was always disagreement between the revenue collectors and us. Because most of us cannot read, they take money from us and write different things in their books. But how can we challenge them when we do not know how the water meter operates (Interview with vendor, case 4, Juaso Obogu, 5 August 2018).

Vendors in cases 5 and 6 also expressed a sense of vulnerability, because of their inability to understand how the water meter operated. As a result, misunderstandings invariably arose regarding the readings from the meters and the actual quantities of water sold:

> We have not been trained on how the water meter works and do not understand how the water meter works. We know our roles and responsibilities, such as not to give free water, collect money from users on water sold, reduce waste and not to allow water to overflow. Although we follow this instruction to prevent water loss, we still make losses. This is very frustrating (Focus group discussion, case 5, Tatale, 17 October 2015).

> Except for four of us who can read and write, the rest of us can neither read nor write. The new private organisation has indicated to us that they will not tolerate any losses. They will take every pesewa from us if we make losses. We confronted the staff on our challenges. In response, they ask our sons to help us in reading the water meters. The whole process is quite difficult for us. If our sons have not been trained how can they teach us? Also they may not be available all the time (Focus group discussion vendors, case 6, Karaga, 24 October 2015).

This study also observed that the NCWSP did not provide clear guidelines on processes for recruiting vendors and their training needs. For example, the recruitment process, training and the content of training were not stated explicitly in the policy guidelines. Neither were the vendors' specific roles and responsibilities clearly stipulated in the policy guidelines. Some local water actors claimed that they had trained their vendors. Evidence shows, however, that such training was not systematic, but rather, ad hoc and centred on what was expected from the vendors, such as the opening and closing of the public standpipes and remuneration for managing the public standpipes. The mismatch between vendors' capacity and the actual skills needed is overlooked in the policy documents.

District Works Department personnel confirmed these observations:

> The recruitment of the vendors is also a contributing factor to the present challenges we face in managing vendors. Most of the vendors operated boreholes in the past, which do not have a water meter compared to the current water system. Again, vendors were recruited based on trust. As a result, revenue collectors do not question the vendors' credibility. Given that, this new arrangement is quite aligned and different, and therefore, detailed understanding and training is vital for an appreciation of the new technology which is aligned with what they knew in the past (District Works Department personnel, case 5, Tatale, 19 October 2015).

Vendors engaged in different practices to resolve the challenges they encountered in managing the public standpipes. These practices differed from the institutional arrangements formally set for standpipe management. Nevertheless, they did enable vendors to cope with the challenges they faced in day-to-day operation of the standpipes. The sections below examine some of these everyday practices with which vendors navigated the management challenges they faced.

6.4.1 Everyday practices to manage challenges (1): Adjusting measuring buckets

Vendors engaged in particular practices to minimise the effect of their inability to understand how the water meters worked and the consequences of this lack of understanding on their daily commission earnings. For example, vendors modified the buckets used for selling water. The vendors decided when a bucket was full and the price users were to pay for a bucket of water. Information gathered from informal group discussions provides evidence of this:

> Why must they [vendors] use their own containers to determine the quantity of water we get? They have created their own rules and created marks on the bucket provided by the WSMT [water and sanitation management team] to indicate where the water should reach. We do not understand some of these vendors. I thought a bucket of water must be full to the brim. Some of us do not buy from the vendor close to the water office. I prefer going to Aunty Mary's because she allows you to fetch your bucket to fill the bucket full (Group interview, case 3, Wiamoase, 22 July 2015).

Apart from defining the level to which a bucket could be filled, some vendors allowed customers to use their own containers. In that case, the vendor and user negotiated the amount to be paid for the water:

> Some vendors have created their own rules and allow others to use their bucket to fetch the water.[6] We also see different prices sometimes applied, depending on the type of the container one brings to fetch water and also sometimes depending on the relationship between the vendor and user. For example, a gallon of water is 15p and a black basin, depending on the size, is 10p and 20p (Focus group discussion, case 3, Wiamoase, 26 July 2015).

It is important to note that while in case 3 vendors showed physical evidence of a bucket marked to reflect the quantity of water one would get, in case 1, there was no such physical evidence of a marked bucket. Vendors further used a water hose to reduce spillage and control the flow of water (photo 6.1).

Photo 6.1
Public standpipe with bucket used for measuring water and hose to control the flow of water

6.4.2 Everyday practices to manage challenges (2): Adjusting opening and closing times for public standpipes

While discrepancies between meter readings and expected revenues informed vendors' actions in case 3, this study found different motivations driving vendors' actions in cases 1 and 2. Vendors' biggest problem in these latter cases was low demand for water at the public standpipes. The low demand affected vendors' commission, making the job of water seller unattractive. As a result, vendors adjusted opening and closing times, so that they could engage in other economic activities to augment their commission earnings.

The majority of vendors in cases 1 and 2 instituted their own opening and closing times. These times were inconsistent with the times negotiated between the vendors and the local water and sanitation management teams. Reduced opening hours affected users' ability to have reliable access to water, even forcing some users to revert to alternative sources:

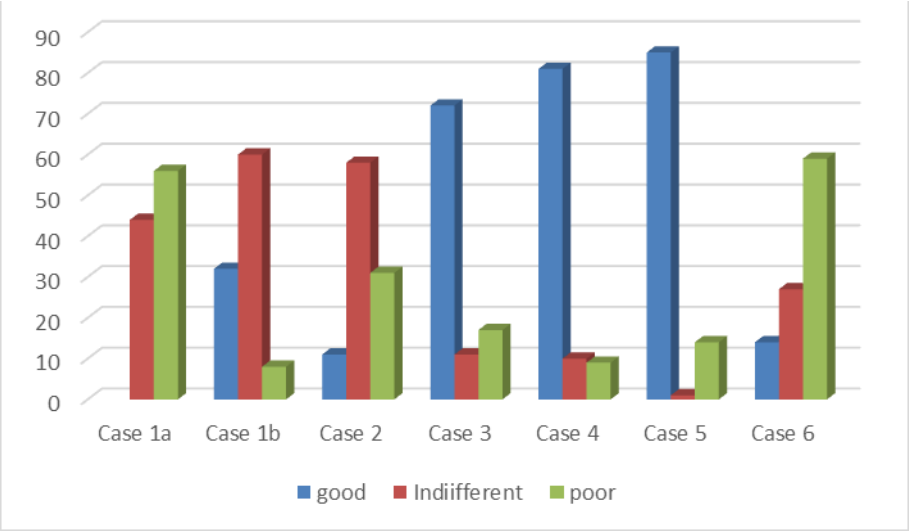
> The vendors are not adhering to the agreed time for opening and closing the public standpipes. This affects our punctuality at school (Focus group discussion youth, case 1a, Nyamedom, 27 May 2015).

Other users in case 1a expressed similar sentiments:

> I wake up very early in the morning, between 4.30 and 5.00, to get the kids ready for school and also prepare food for the morning. But the taps are not open on time. Sometimes at 6.30 (Group interview, case 1a, Nyamedom, 26 May 2015).

Figure 6.1 presents survey results confirming these claims.

Figure 6.1
Users' evaluation of opening hours of public standpipes (% of respondents)

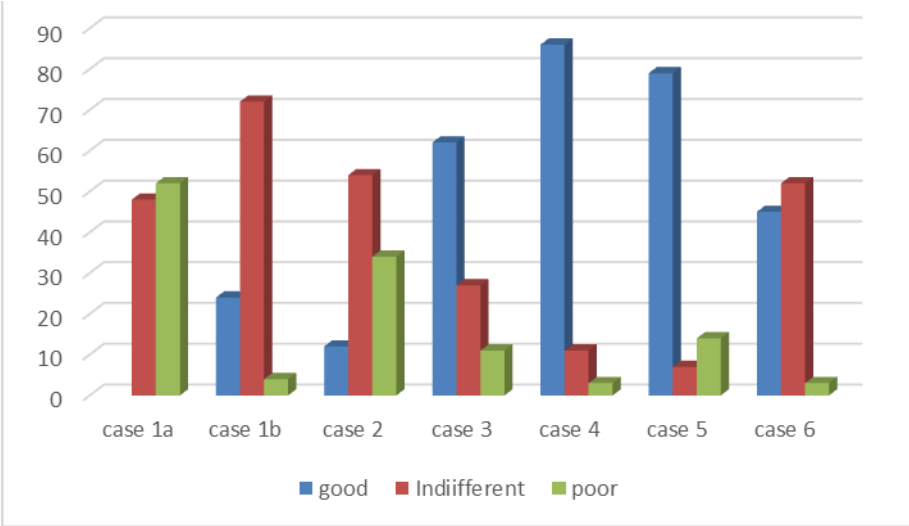


Source: Author

In case 1b, 60% of those interviewed indicated that they were indifferent to the opening hours of the public standpipes. This was followed by 58% in case 2 and 44% in case 1a. For these respondents, it is difficult to judge whether the opening hours were generally convenient. Here it must be noted that vendors in these cases were inconsistent in the times that they opened and closed the public standpipes. This, too, made it difficult to objectively evaluate the vendors' daily schedules. Nonetheless, 59% of those surveyed in case 6[7] rated the daily opening and closing times as poor and 27% were indifferent. In contrast, among users in cases 3, 4 and 5, 72%, 81% and 85%, respectively, perceived opening hours as good.

Regarding vendors' punctuality, in case 1b, 72% of those surveyed expressed indifference regarding vendor punctuality, followed by 54% in case 2, 52% in case 6 and 48% in case 1a. Respondents in cases 3, 4 and 5 were more satisfied with the vendors' punctuality, with 62%, 86% and 79%, respectively, characterising it as good. In case 1a, 52% of respondents rated vendor punctuality as poor, as did 34% in case 2.

Figure 6.2
Users' perceptions of vendor punctuality (% of respondents)



Source: Author

It is important to note that deviating from the arrangements agreed with the water and sanitation management teams was done solely at the initiative of the vendors in cases 1, 2 and 3. However, in case 4, both local water actors and vendors initiated new institutional arrangements for vendors' accounting for water sales. The new arrangements were to minimise tension and conflicts between revenue collectors, vendors and users. For example, in case 4, half of the water meters were dysfunctional. Thus, service providers could not use them to calculate revenues. Daily expected sales were instead based on a fixed amount imposed on each vendor determined by the location of the public standpipe.

6.4.3 Moral and community-embedded institutions: A disincentive to change institutional arrangements

We observed that in some of the cases, particularly cases 5 and 6, the vendors' actions were not always informed by economic and selfish motivations. Even though vendors in these cases faced similar challenges, such as lack of appropriate containers[8] to determine and measure the quantity of water sold, these vendors did not modify the given institutional arrangements, though they accumulated losses.[9]

The majority of the vendors in cases 5 and 6 continued the given institutional arrangements. The only exception was one vendor in case 5 who adjusted water tariffs based on the containers brought by users to draw water (40-50 litres). That vendor justified his actions as follows:

> I do not understand why they [water actors] collected the 40 litre containers and did not replace them with the 30 litre containers they wanted us to use. And they expect us not make losses? To avoid making losses, I took my own initiatives. I have maintained the previous 40 litre as the main source for measuring water. However, I have increased the price to 20 pesewas instead of 10 pesewas as instructed by management. And for a Kuffour gallon (25 litres), I charge 10 pesewwas. I need to get money and not to make a loss (Vendor, case 5, Tatale, 20 October 2015).

There are several possible explanations for this result. The vendors' actions were informed by their values and worldview regarding collective goods. Difficulties in assessing water in the past put vendors in a position where their sense of moral obligation came to outweigh their economic interests. Vendors did not want to deviate from the given institutional arrangements and understood their responsibility as to make water accessible to everyone, irrespective of the challenges they themselves faced in the day-to-day management of the standpipes. The institutional arrangements for operating the standpipes were to ensure a reliable water supply, by guaranteeing consistency in opening hours and when users could access water. Based on this logic most vendors in cases 5 and 6 decided not to engage in any practices that would contradict the set institutional arrangements. The behaviour of these vendors contradicts the general perception of actors as being motivated purely by their own economic good, particularly to deviate from policy guidelines, as observed in cases 1, 2 and 3. Although vendors in cases 5 and 6 faced challenges, their assessment of

the situation did not lead them to engage in practices contrary to the established institutional arrangements.

Yet, vendors in case 3 did adjust bucket sizes and prices as a means to bridge the gap between expected revenue and actual revenue. Vendors in this case could not adopt the practice of reducing opening times, as there were no alternative water sources nearby. Users could therefore be expected to resist any attempt by vendors to close the public standpipes. Indeed survey results indicate high vendor punctuality in cases 3, 4 and 5 (see figure 6.2). However, in cases 1 and 2, where there was a lack of urgent demand, vendors could more easily close the tap to engage in other economic activities. Hence, the survey found a large number of users' dissatisfied with vendor punctuality in those cases.

In sum, we can conclude that vendors' capacity to manage public standpipes depended on their skills and training level and their knowledge about how to read and interpret the water meters and calculate daily revenues. While these conditions did trigger some vendors to modify the given institutional arrangements, vendors' personal motivations were found to be important in determining their final choices and practices. In cases 1, 2, 3 and 4, a primarily economic rationale motivated vendors' action. Vendors were interested in improving their commission earnings, as there were often discrepancies between readings from water meters and the revenue they expected. Hence, vendors either found ways to make more money through the public standpipes, such as by cheating users, or they closed the tap to engage in other economic activities.

It is important to understand that the vendors' actions may have been motivated by a genuine concern to find solutions to the challenges they faced, in order not to lose their position as vendors. However, it must be recognised that the job of a water vendor was unattractive because of the low remuneration and incentives it offered. Qualified candidates were therefore unmotivated to take up the position. The job attracted mainly illiterates who could hardly be expected to understand how the water meters worked and keep accurate records, even if they had received the required training.

Findings also indicate that the extent to which vendors engaged in specific practices (or did not do so) was dependent on local water actors' ability to enforce the given institutional arrangements. For instance, in cases 1 and 3, revenue collectors enforced readings from the water meter to determine the revenue expected from the vendor. Hence, many vendors

there engaged in practices like adjusting bucket fill levels and revising water fee schedules. Vendors could then make more profit by reducing the quantity of water sold to users for the same fees.

In case 2, enforcement was relaxed and vendors manipulated standpipe opening times in order to engage in other economic activities to supplement their daily commission earnings. Enforcement was stricter in cases 5 and 6, and few vendors in these cases were found to have modified the institutional arrangements they had been given. In addition, community-embedded institutions and practices based on trust and social cohesion dissuaded vendors from engaging in practices that would inhibit community members from getting access to water.

This chapter began by demonstrating that a gap in technical capacity and skills, alongside inadequate training and institutional support, constrained local actors' capacity to manage their water system. It then went on to describe how local water actors and the local social and institutional context influenced the kinds of practices adopted in response to the challenges encountered. The discussion section below looks back at the issues raised by this chapter in relation to the larger questions posed in this research.

6.5 Discussion

On the question of what accounts for differences in the management of water supply systems, this study has so far found that the local social and institutional context influences actors' ultimate actions and practices. Actors' prospects for changing the institutional arrangements by which they managed their water system were determined by (i) access to alternative water sources, (ii) actors' institutional and technical capacity and (iii) the commitment and support of implementing actors.

In cases 5 and 6, institutional and technical capacity gaps among local water actors constrained their ability to manage their water system. These gaps eventually triggered state actors to step in, coming to local water actors' assistance. State actors negotiated for new institutional arrangements under private-based management and controlled the contracting process. Similarly, in cases 3 and 4, local actors' weak technical knowledge and skills constrained their ability to manage their water system efficiently. These local actors found solutions by relying on ASTWO, a national network of

small town water operators. This organisation provided tools as well as technical training to improve members' performance.

Again, as the example of the vendors shows, an absence of training and poor understating of their roles made it difficult for water actors to carry out their responsibilities. Vendors faced losses, because they did not understand how the water meters worked. This led to tension and conflict between vendors and revenue collectors on the earnings declared and expected. This motivated some vendors to modify institutional arrangements, for example, by adjusting water bucket sizes, revising prices and changing public standpipe opening times.

These findings corroborate Campbell's (2004) notion that actors are more likely to pursue or resist institutional change and engage in other practices when newly given institutions or institutional arrangements affect the existing distribution of resources. As shown in this chapter, state actors (in cases 5 and 6) and local water actors (in case 3) modified institutional arrangements for water resource management, to ensure the continued operation of the water supply system. In cases 5 and 6, local water actors claimed they were not part of the initial tendering process, but they ultimately accepted private-based management. Evidence further suggests that local actors were primarily concerned with maintaining the functionality of the water system; hence, their decision to collaborate and not resist the changes made by state actors. Past challenges in acquiring water played a crucial role in informing state and local actors' decisions to change institutional arrangements, in order to preserve the functionality of the water system.

The practices and innovations engaged in by actors in cases 3, 5 and 6 are consistent with the findings of similar studies, which conclude that when players recognise their own bounded rationality, they experiment with institutional innovations and attempt to mimic successful institutions elsewhere (Ostrom 2005, Kingston and Caballero 2009). Actors in cases 3, 5 and 6 recognised their inability to manage their water system in a cost-efficient manner. This led to their reliance on the network organisation (in cases 3 and 4) and on Pumptech (in cases 5 and 6) to fill the gaps in technical, operational and financial competency.

This study found that actors were not motivated only by capacity-related constraints. For example, in case 4, although water personnel lacked the capacity to manage the water system efficiently, they contested institutional modifications proposed by the water and sanitation management

team. The practices of the water personnel in case 4 can be described in a similar vein as other studies, which construe institutional change as a confrontation between those promoting new rules and others favouring the status quo (Kingston and Caballero 2009: 173). As argued in many studies, actors do not accept new ideas without questioning, reflecting and reacting to the new policy ideas (Mukhtarov 2012). Actors can resort to individual bargaining and engagement in conflict or collective action to resist institutional and technological changes for personal benefit or for the collective good (Kingston and Caballero 2009, Mukhtarov 2014, Brousseau et al. 2011).

This chapter demonstrated that some water personnel felt threatened (economically) by introduction of new computer software for monitoring financial records. Perhaps their refusal to accept the new program was related to the fact that the software could expose shoddy dealings. This is consistent with the path-dependence literature, which points to the mechanism of self-reinforcement and the switching cost involved in adopting new practices as making it economically irrational to support change (Prado and Trebilcock 2009, Martin and Sunley 2006). Local water personnel may have resisted change because the old way of managing the water system better served their economic interests, and the effects of the new institutional arrangements could be a threat to those.

The activities and behaviour of local water actors in cases 3, 4, 5 and 6 corroborate Dolowitz and Marsh's (1996) argument that translation processes are constrained by (i) inadequate institutional capacity, resources, finances and information on structures and (ii) the economic, social and political ideologies of actors. Similarly, as demonstrated in this chapter, the local social and institutional context of beneficiary communities shaped the decisions made by state and local water actors on how the water supply systems should be managed. Water actors modified the institutional arrangements for water system management to improve implementation of the NCWSP. Their renegotiation of institutional arrangements was meant to adapt the arrangements to the local social and institutional context of the beneficiary communities.

Even though the institutional context of beneficiaries constrained and shaped their interactions, embedded institutions also provided opportunities for actors to modify institutions (North 1990, Hodgson 2006). These institutions are expressed through rules, social norms and cultural beliefs, and provide the structure in which and mechanisms whereby actors make

and implement decisions (Scott 2001, Ostrom 2005, Campbell 2004, Hodgson 2006, North 1990). In the current study, too, water actors relied on existing institutional arrangements, though they also modified given institutions and institutional arrangements to suit their local situation.

Notwithstanding the above, external factors driving change are not sufficient to explain actor agency. What actors ultimately do, as shown in this chapter, is dependent on their motivations and logic (March and Olsen 2006, Gómez 2008, Helmsing 2013). On the question of the motivations and logic behind actors' choices and practices, the current study suggests that economic considerations do stimulate actors to modify institutional arrangements. The lack of an alternative water source in cases 3, 5 and 6 meant that water was an urgent need; hence, water actors worked hard to ensure customer satisfaction, revenues from water sales and minimisation of water unaccounted for. Through the new practices, local water actors were better able to cope with the challenges that came with technological and institutional changes under the NCWSP.

Similarly, state actors were motivated by the need to ensure that the private organisation (Pumptech) did not take advantage of the weaknesses and technical inadequacies of the local water actors. In addition, by ensuring that Pumptech retained and trained all existing staff, they aimed to upgrade water personnel's capacity and to retain institutional memory. With this new approach, local water actors were to be prepared to manage the water system on their own in the future. Like the actions of local water actors in case 3, economic considerations motivated local actors to seek professional support from ASTWO and motivated state actors' invocation of private-based management in cases 5 and 6. Both actors sought to ensure the efficient and professional management of the water system (cases 3, 5 and 6). While professionalism and efficiency was also a challenge for local water actors in case 4, some local actors rejected any new institutional arrangements, as they considered them to be unbeneficial to them.

In cases 1, 2, 3 and 4, vendors modified institutional arrangements for managing the public standpipes due to their need to make more money. They adjusted water bucket sizes and prices in cases 3 and 4 and modified opening and closing times in cases 1 and 2. Vendors changed institutionalised rules and engaged in new practices in direct response to the everyday challenges they faced. Vendors were motivated by the desire to maximise their own economic benefit, sometimes by cheating users, and they implemented practices to offset losses they might incur. According to principal-

agent theory, vendors may not always be at a disadvantage due to a capacity gap; they might take advantage of gaps in implementation to serve their own personal interests. This finding corroborates March and Olsen's (2006) notion that actors' motivations can be explained by rational and economic concerns (the logic of instrumentality). This logic can be said to apply to the state actors in cases 5 and 6, to local actors in case 3 and to the water vendors in cases 1, 2, 3 and 4.

Vendors in cases 5 and 6, however, refused to engage in new practices, as they considered it morally unacceptable to engage in any practice that would deny users water. Instead, normative and cognitive considerations (the logic of appropriateness) (Campbell 2004, Gómez 2008, March and Olsen 2006) informed the choices they made. Vendors acted in these cases to maintain social cohesion.

Notwithstanding the above, institutional change remains highly dependent on the resources that actors possess. Such resources (see section 3.5.4) provide the toolkits with which actors (institutional entrepreneurs) can effect changes, as further elaborated in chapter 7. The local social and institutional context of the implementers (local water actors) in all of our six cases constrained their ability to translate the NCWSP into actual practice. At the same time, local conditions determined how these actors interpreted and the extent to which they did or did not modify institutional arrangements for managing their water system.

To what extent, can we classify the practices of water actors as bricolage (Campbell 2004; Cleaver 2012, 2002)? The evidence presented in this chapter suggests that the practices these actors embraced to change institutional arrangements are not bricolage. The practices employed by state and local water actors are consistent with the principles of the NCWSP. Changing the institutional arrangements to private-based management (in cases 5 and 6) and community-based management (in case 3) can be better described as instances of translation. The changes made to institutional arrangements were temporary arrangements to ensure that private-based management and community-based management fit local social and institutional conditions. This finding mirrors those of other studies in the translation literature that examine how recipients' local social and institutional context shapes their interpretation and implementation of national policies (Dolowitz and Marsh 1996, 2000; Whittle et al. 2010: 19).

In case 3, the capacity of local water actors was inadequate to manage the water system using community-based management. However, local

actors' exposure to a larger network of operators provided them access to technical support and training. Local actors' reliance on ASTWO's professional and technical support, in this case, improved customer satisfaction and the technical, operational and financial performance of the water system. In cases 5 and 6, inadequate technical capacity of local water actors triggered a change from community-based management to private-based management. The introduction of professionalism to the management of water facilities is consistent with Harvey and Lock's (2006) argument that the voluntarism nature of the community management concept provides little room for recruiting professionals with the capacity to manage a system effectively.

The absence of mechanisms for replacing and training local water actors once positions are vacated is a further factor that worsened the situation in many beneficiary communities. In addition, a lack of transparency and accountability led to misgivings and distrust of water and sanitation management committees. Finally, inadequate support from local government staff led to a sense of abandonment and demotivated existing and potential local water actors. These challenges are consistent with arguments raised in the policy implementation literature on the activities of street-level bureaucrats (Lipsky and Bureaucracy 1980, Lipsky 2010). Street-level bureaucrats are said to engage in practices to circumvent the challenges they encounter in the course of implementation (Maynard-Moody et al. 1990).

All of the above implies that policy implementation invariably requires policy adaptation (e.g., Lindblom 1979). All these factors were observed among local water actors in the current study. Hence, I describe water actors' practices not as institutional bricolage but as negotiation or modification of institutional arrangements. These practices were strategies employed to manage the challenges encountered in the course of implementing the NCWSP.

Nonetheless, an important question that remains is the extent to which the renegotiated institutional arrangements guarantee efficiency and functionality of the water system. In other words, will the changes ensure that water actors have enough revenue for operation and maintenance, for upgrades and for future expansion of their water supply system?

The future, in this regard, looks troubled for all of the water supply systems examined. Financial resources were limited for managing and expanding the water systems to incorporate new users. While the water

systems under community-based management (cases 1, 2, 3 and 4) had retained all revenue after deduction of expenditures, those under private-based management (cases 5 and 6) were paying 70% of their revenue to a private actor in management fees. With much of the revenue going to the private manager, and considering that the water system was only a year old, the community seems to be bearing a disproportional amount of risk compared to the private organisation. The argument made is that a new water system does not require much maintenance, and depreciation is low. Yet, particularly for such a young system, providing service contracts on a piecemeal basis (two years) without tying the private organisation to any future commitment is risky, and the community will face the consequences in the future. Considering that there is no clause within the contract to pin Pumptech down for a future commitment, there is a real danger of Pumptech declining to renew the contract as the system ages and needs more care. In that case, it could be challenging for system managers to contract another private organisation for future repairs and maintenance.

While the water system in case 3 had a relatively good financial standing, it was nonetheless insufficient to cover the costs of system upgrades, rehabilitation and expansion to newly developed localities in the community. These findings mirror those of Harvey (2007), who also concluded that policymakers need to provide full cost determinants for rural water supply. Only with these can we know what costs communities and state and external actors can recover. Currently the tariffs for all of the water systems are inadequate to cover operations and maintenance, future expansion and rehabilitation. This has implications for the institutional changes envisaged under the NCWSP. We foresee that any further institutional changes are likely to be slow and show little progress in terms of improving the quality of water services.

Evidence gathered in the current study indicates that water system quality remains a general problem (see appendix 14). The majority of users in cases 1, 2 and 4 continued to rely on unwholesome sources due to disruptions in the opening times of public standpipes and the continued availability of free alternative sources. In other circumstances, the inability of water actors to expand and upgrade water facilities left residents reliant on contaminated sources nearby (see figure 5.1).

6.6 Conclusion

This chapter examined how the local social and institutional context influenced actors' capacity to manage their water supply system and the practices they adopted to manage the challenges they encountered. Factors that influenced actors' acceptance of new institutional arrangements were the information actors possessed on the NCWSP; the urgency with which a new water supply was needed; the extent to which the institutional arrangements under the NCWSP were consistent with local values, worldviews and everyday practices; and the influence of local elites. However, actors motivations and logic were also key determinants of the kinds of change and practices that emerged. Moreover, the extent to which actors emerged as change agents or institutional entrepreneurs, as described in the next chapter, depended on their command over resources. Nonetheless, an important contribution of the current study is the finding that the availability of alternative water sources was closely correlated with the degree of agency exhibited by actors and their propensity to innovate in management of their water supply facility. Improving the quality of water services and avoiding water facility breakdown informed the actions and practices of both local water actors and state actors. In some cases, the presence of alternatives, or the scarcity water sources, determined vendors' actions. In other cases, actors' ideologies and cultural values determined the actions and strategies they ultimately employed.

Notes

[1] These include the Regional Community Water and Sanitation Agency (CWSA-NR), the DA and NORST.

[2] A private company was made to prepare a proposal and take responsibility for operation and maintenance of the water systems in cases 5 and 6.

[3] Commissions paid in case 5 were not consistent. They ranged from 20% to 5% depending on the whims of the water personnel and the water and sanitation management team.

[4] The guidelines and formats for accounting under the community-based management model were inadequate for larger systems (for a population greater than 10,000). Also, training provided for accounting staff was suitable for smaller communities under community-based management and not for the larger communities and systems to be managed by private service organisations.

[5] The meters measure the volume of water sold daily, for which the vendor must account to the revenue collectors. The meters serve as the basis on which vendor commissions are calculated.

[6] Two water taps are usually provided, so two users can fetch water at the same time. But the vendors are usually given only one bucket to measure the water.

[7] Two of the four submersible pumps in case 6 were not functioning. Therefore, water was being rationed to 2-4 days each week at each public standpoint.

[8] The vendor used to have 40 litre containers to measure water under community-based management. However, that container was confiscated by the new private manager, to be replaced with a 30 litre container. At the time of the interview, no replacement container had yet been provided.

[9] Water meters were adapted for the sale of 30 litres of water for 10 pesewas. Commissions were based on 10% of the total volume of water sold.

7 Displaying Entrepreneurship: The Role of State and Local Water Actors in Processes of Institutional Change

7.1 Introduction

The capacity of actors to modify, resist, maintain and enforce institutional change depends on factors embedded in the community. As indicated thus far, the local social and institutional context constrained actors' capacity to translate and implement the NCWSP. Foremost among these contextual factors were the institutional and technical capacities of implementers, the urgency with which a water supply facility was needed, knowledge and accesses to information on the NCWSP and the support and commitment of community and organisation leaders. Yet, these factors were not only constraints; they also provided resources to enable actors, the so-called institutional entrepreneurs, to engage in institutional change processes.

The emergence of challenges in implementation is necessary but not sufficient to motivate actors to display their agency and control over resources, to emerge as institutional entrepreneurs in resisting, modifying and facilitating institutional change. The actors classified as institutional entrepreneurs in this study engaged in several practices and strategies in response to challenges they faced in implementing the given institutional arrangements and satisfying their interests.

Chapters 5 and 6 demonstrated, consistent with other research, that reformers' inability to achieve the desired outcome was because the new policy ideas did not fit with the implementing communities' local social and institutional context, leading actors to pursue new institutional arrangements and practices (Andrews 2013, Campbell 2004). Actors modified the new policies to "fit their unique needs in time and space and [were] themselves transformed in the process" (Whittle et al. 2010: 19). In other words, actors were conscious of their environment and sought to change institutional and technological arrangements that were inconsistent with

their existing environmental conditions, interests, ideologies and worldviews. As found in all six cases under study, actors responded to institutional and technological changes differently, due to pressure from their environment. While there was some awareness of actors' roles in engaging in entrepreneurship, the details of their entrepreneurship warrant further scrutiny.

This research defines institutional entrepreneurs as individuals or groups of individuals that collectively employ practices and strategies to navigate institutional and technological challenges. These individuals or groups represent various organisations with different roles and responsibilities. Of primary interest as institutional entrepreneurs are representatives of government agencies, international agencies, local water organisations and traditional organisations with the following characteristics: (i) they are reactive and respond to challenges and (ii) they renegotiate, modify and transform new policy ideas introduced by external and state actors. We distinguish traditional actors, state and affiliated actors, local water actors and vendors as displaying forms of entrepreneurship that were often different from the institutional arrangements given under the NCWSP.

Institutional entrepreneurs are the driving force behind practices and strategies employed to change or modify institutional arrangements that are inconsistent with the local social and institutional context. These change actors engage in institutional entrepreneurship or bricolage by combining institutional principles and practices to resist, modify or facilitate institutional change (Campbell 2004). This chapter takes a closer look at institutional entrepreneurs' activities and practices. This will enable us to understand what characteristics, motivations and resources allow institutional entrepreneurs to engage in bricolage or institutional entrepreneurship.

A key means of understanding the innovations of institutional entrepreneurs is by observation of actors' everyday practices. Everyday practices provide a window for explicit analysis of why and how institutional entrepreneurs engage in institutional change. In other words, they enable us to understand why implementation is rapid and leads to big changes in some contexts, while being slow and path dependent in other contexts (Pierson 2000). Through institutional entrepreneurs' activities, we can account for the processes and mechanisms by which institutional change is path dependent and gradual or rapid and revolutionary in nature. The actions of institutional entrepreneurs enable us to understand actors'

preferences and choices and the motivations and logic behind them. Moreover, institutional entrepreneurship allows us to incorporate power into our analysis of institutions (Helmsing 2013). Power takes the form of resources with which institutional entrepreneurs block, enforce, promote or change institutional arrangements.

This chapter examines, in turn, the various actors engaging in institutional entrepreneurship in relation to implementation of the NCWSP. Each section looks at the characteristics of an institutional entrepreneur, alongside the practices and strategies they adopted to achieve their objectives and the motivations or conditions informing their actions. What resources of institutional entrepreneurs have enabled or constrained them in enforcing, modifying, frustrating and promoting the implementation of institutional change?

7.2 Displaying entrepreneurship: Chiefs as enforcers of state-led institutions

This section examines how the chiefs in all of our cases displayed entrepreneurial characteristics (i) in enforcing the 5% contribution towards construction of the water facility and (ii) in controlling the composition of the water and sanitation management teams. How institutional entrepreneurs perceived themselves determined the direction and strategies they could cognitively imagine and initiate (Emirbayer and Mische 1998, North and North 1992, Rusaw 1998). Chapter 5 (section 5.2.2) introduced a number of strategies that chiefs adopted to ensure compliance with the 5% levy. One of these, found in cases 1b and 2, was to link access to land for burials to fulfilling payment of the 5% levy. In case 4, chiefs collaborated with state and political organisations to enforce compliance. Chiefs, as indicated earlier, had long been in charge of grassroots governance and community development (Bamfo 2000). Given that role, traditional actors perceived ensuring residents had reliable access to potable water as within their role and responsibilities; hence, the need to enforce payment of the 5% levy. As observed in chapter 4, these political leaders were traditionally responsible for enforcing rules for the management of natural resources, including water; and they were still exercising that role up to the time of this study. Enforcing payment of the 5% levy was therefore perceived as legitimately within the power they held and the authority of their leadership position.

One might therefore ask to what extent the chiefs in cases 1b, 2 and 4 perceived themselves as institutional entrepreneurs or as agents to facilitate institutional change in the water sector. A chief in Kyerkor expressed some of the reasons for enforcing the 5% levy:

> According to the health personnel, the rivers surrounding the community are responsible for the high guinea worm disease. As leaders in the community, it is our duty to ensure that we get clean water. The new water project will help us to reduce guinea worm disease in the community. So we had to find all means to make people pay the 5% levy in order to get the water system constructed (Chief, case 2, Kyerkor, 7 June 2015).

Chiefs' actions to enforce citizens' payment of the 5% levy are consistent with key characteristics of change agents; that is, they supported the creation of institutions that they considered appropriate and aligned with their interests (Dacin et al. 2002: 47) and they acted strategically to bring change (Jensen and Fersch 2016, Weik 2011). The chiefs in cases 1b and 2, supported construction of a new water facility because it would ensure that residents had access to a hygienic water source; in cases 3, 4, 5 and 6, the chiefs supported the new water facility because it would guarantee residents access to a more reliable water source. These actions of the chiefs were consistent with their role and responsibilities to ensure the development of their communities and provide for the well-being of citizens within their jurisdiction.

On the question of their motivations, these can be characterised as both political and economic. Schneider and Teske (1992), similarly, identified political and economic reasons as informing entrepreneurs' actions. Moreover, the chiefs' capacity to use existing local social institutions to enforce the 5% levy stems from most chiefs' perception of the enforcement of rules being an integral part of their political role to prevent free-riders:

> We have the responsibility to maintain the unity and peace that exists here. This community has a strong communal spirit, which we have exhibited in the past. We cannot fail. We had to ensure the project is realised and completed. If we fail in our capacity to recover the 5% levy, the District will never take us seriously. And it goes against us as leaders who are in control of its citizens (Chief, case 1b, Asuase, 29 May 2015).

Thus, through the objective of complying with the 5% levy, the chiefs reinforced power relations. They also demonstrated their capacity to enforce development initiatives by institutionalising community participation in the future management and maintenance of the water project, in addition to ensuring the initial community contribution to the construction. This strengthened and reaffirmed the chiefs' legitimacy and governance over water resources and control over citizens' choices. Nonetheless, the role and responsibilities of the chiefs as an important development agent and the extent to which the chiefs could emerge as an institutional entrepreneur was constrained by their access to and control over resources. Existing norms, shared beliefs, values and cultural norms determined the kinds of practices that the chiefs could legitimately employ to modify or enforce institutional change.

The capacity of the chiefs to enforce the 5% levy was made possible by the presence of cultural beliefs and practices of honouring and paying respects to the dead. Indeed, in cases 1b and 2 the chiefs employed access to burial sites to enforce implementation of the 5% levy. Their social and political position in the community allowed them access to these community-led institutions.

It is somewhat surprising that local water actors in case 1a could not enlist the support of their chiefs to employ community-embedded institutions to enforce the 5% levy. This was because the chiefs in that case lacked the authority and power to force citizens to comply with the 5% directive. The chiefs in case 1a had an overlord role,[1] which did not impart the same control over community residents as their counterparts had in cases 1b and 2. If employment of community-embedded institutions had been attempted in case 1a, the result would likely have been much different. Hence, local water actors had to look for alternative strategies to ensure compliance. This institutional gap limited local water actors' ability to rely on the chiefs to ensure compliance with the 5% levy. The same community-initiated rules used to enforce the 5% levy in cases 1b and 2 were not acceptable in case 1a. As read in chapter 5, local water actors had to rely on associations, groups and loans from the bank to fulfil the 5% contribution in the latter case.

Along these same lines, March and Oslen (2006) and Campbell (2004: 69-70) maintained that the strategies adopted by institutional entrepreneurs must be consistent with the dominant normative and cognitive principles existing within the social environment. These follow a logic of

appropriateness by which the recombined elements must be acceptable and legitimate.

Despite the link between chiefs' authority and their ability to invoke community-initiated rules to enforce the 5% levy, this study found that the position and authority of the chiefs did not always ensure compliance. Chiefs in case 4, had the same powers and authority as those in cases 1b and 2. Notwithstanding this, they had to rely on state actors, specifically the courts and police, to enforce compliance. The strategies adopted in case 4 are consistent with processes of bricolage and institutional entrepreneurship. Actors' responses to challenges are often dynamic, uneven and temporally intermittent. Institutional entrepreneurs' capacity to engage in change and the strategies they adopt to this end take place within the limits of the available resources and social circumstances (Cleaver 2012, 2002). For example, in case 4, the use of funeral rites and provision of land for burying the dead to enforce payment would have not been sustainable. Revering the dead is an important cultural value among the Ashanti's in Ghana (in case 4 most inhabitants were Ashanti). Because of the central place of funeral ceremonies in the everyday lives of citizens in case 4, using funeral rites and land rights to enforce implementation would have fuelled resistance, rendering enforcement ineffective.

The activities of the chiefs corroborate Sheingate's (2003) description of political entrepreneurs as resourceful political leaders who use available resources to influence policies or control decision-making processes. Here, the social position of the chiefs allowed them to control citizens' preferences and choices and determined the strategies they adopted to enforce the 5% levy. In short, chiefs used their social and political position as community leaders to promote the institutional reforms under the NCWSP.

The actions and activities of chiefs accord with their political and social role as custodians of the land. The teething troubles encountered in institutionalising participation (paying the 5% levy) can therefore also be seen as an opportunity for the chiefs to assert their authority and power over their subjects. The strategies adopted by the chiefs and local water actors in case 4 to enforce implementation differed from those adopted in cases 1b and 2. The choices of the former actors were constrained by the local social context and practices, which influenced the kinds of practices that were legitimate, acceptable and sustainable.

Interestingly, while the chiefs were supportive of the institutional reforms as described above, these same chiefs perceived establishment of the water and sanitation management teams as a threat. The management teams were one of multiple entities created under the NCWSP. As discussed in chapter 5 (section 5.2.3), these parallel structures conflicted with traditional political structures. Thus, creation of the water and sanitation management teams and other water-related entities (the various water system personnel positions) undermined the authority and powers of the chiefs, who had traditionally been in charge of the governance of water resources. The results of this conflict were consistent with those found in other studies and suggest that if proposed changes run counter to an existing belief system or threaten the leaders of existing organisations, institutional change becomes path dependent (North 2005, Prado and Trebilcock 2009).

Similarly, this study has demonstrated that existing traditional political structures frustrated the work of the water and sanitation management teams, hence, making change counterproductive. Chiefs in cases 1 and 6 supported the activities of the management teams because these activities confirmed their own political interests. Nonetheless, in cases 2, 3 and 4 the chiefs resisted formation of the water and sanitation management teams because here they seemed to threaten the chiefs' political position and interests. For example, in case 2, members of the water and sanitation management team were replaced even though their formal term had not yet expired. Accusations of wrongdoing were justified by the notion that the activities of the previous members of the management team conflicted with the interests of the ruling government. Furthermore, the previous management team members were said to have been misappropriating revenues, warranting the decision to replace them with more trustworthy staff. In case 3, the chiefs meddled in the activities of the water and sanitation management team and influenced its membership by filling vacancies with their own candidates. Here, the chiefs were motivated by personal interest, specifically, to influence and set the agenda for decision-making and control water system personnel and activities. As argued by Helmsing (2013), actors whose benefits are threatened by the establishment of new organisations may end up impeding processes of change.

These findings support previous research by Sarpong (2005), Fuest (2006) and Nyarko (2007) which also reveal interference by chiefs in water and sanitation management team membership and activities in

communities in Ghana. Likewise, chapter 5 described a number of instances in which chiefs' actions were motivated mostly by economic considerations and personal benefit, such as chiefs' not paying for water consumed, employing relatives in vendor positions, borrowing from the water account and using water revenues for activities unrelated to water and sanitation. This is consistent with findings from Eguavoen and Youkhana (2008), who demonstrated that the local elite was motivated to influence the membership of water and sanitation management teams in order to emphasise their own privileges as community leaders. For example, some chiefs used their influence to ensure that public standpipes were built on their property or close to their houses (Eguavoen and Youkhana 2008).

The practices of the chiefs in enforcing or resisting the 5% levy and in supporting or resisting the work of the water and sanitation management teams reaffirmed their authority and control over development-related issues. This is linked to their political and social position as leaders in charge of coordinating development activities in the community they governed. The chiefs may also have been motivated by the desire to reaffirm their own position as an active development agent. By ensuring that the beneficiary community fulfilled its obligation to pay 5% of the cost of the project, the chief ensured that the water project would be implemented. This motivation represents a benevolent act, consistent with Helmsing (2016), who maintained that social entrepreneurs use their resources to bring social change (Hockerts et al. 2006: 37). It is important to note that the activities of these chiefs in this circumstance contradicted the exclusionary provisions of the NCWSP, which prohibited chiefs from interfering in NCWSP implementation. However, the chiefs ignored this provision – though it was explicitly stated in the programme policy documents – using their control over the citizenry and their social and political position to support implementation of the 5% levy.

Similarly, chiefs' control over the establishment and composition of the water and sanitation management teams was, in some circumstances, borne out of genuine concern to ensure the collective good of the community. For example, in case 4, users were unsatisfied with the performance of the water and sanitation management team. In response, the chiefs facilitated replacement of underperforming members with more trusted candidates. Indeed, as leaders and development agents, the onus was on the chiefs to ensure that the water and sanitation management teams were accountable to the community and provided quality water

services. In cases 2 and 3, too, the chiefs replaced the water and sanitation management teams, though in these cases they were motivated by a desire to serve and satisfy their own economic interests.

Why did the behaviours of the chiefs differ? Here the answer can be found in existing embedded institutions, which influenced how traditional actors interpreted and translated policy ideas. The relationship between the chiefs and the local water actors determined the actions and practices displayed by each. This does not mean that chiefs with less influence on the water and sanitation management teams did not have an economic or personal interest. As discussed in chapter 5, the new water and sanitation management teams in some cases (e.g., in case 4), were perceived as cronies of the chiefs. Further evidence suggests that there was still mistrust between the citizenry, on one hand, and the chiefs and water and sanitation management teams, on the other, particularly in case 4. There was a general perception that the current crop of water and sanitation management teams were favourites of the chiefs. In essence, this means that the chiefs still indirectly controlled the day-to-day management of the water system:

> We are still experiencing the same problem just like the old MWST [water and sanitation management team]. Since they assumed their position, they have not rendered the account to us. In addition, water does not flow frequently. This is a major problem to us (Focus group discussion, case 4, Juaso Obogu, 9 August 2015).

As particularly evidenced in cases 2, 3 and 4, these chiefs seem to have acted mainly to reinforce their own control over the water system, especially with regard to daily operation and management of the facility. In other words, their motivation was purely to promote their own economic and political interests.

This finding is corroborated by Dacin and colleagues (2002: 47), who argued that change agents support the creation of institutions that they deem to be appropriate and aligned with their interests. They act strategically to bring change (Jensen and Fersch 2016, Weik 2011) by reconfiguring organisational roles and structures (Buchanan and Badham 1999b).

The actions of the chiefs in cases 2, 3 and 4 were consistent with a key characteristic of political entrepreneurs as "cunning, resourceful and opportunistic leaders, whose skillful manipulation of politics somehow results in the creation of…, new institution[s]… and have transformative

effects on policies" (Sheingate 2003: 188). As shown in the current study, chiefs employed different strategies to reconstitute the water and sanitation management teams, appointing members they could manipulate to satisfy their own personal interests. Moreover, they invoked existing institutions and structures to ensure compliance with new institutional arrangements that were likely to reinforce their own legitimacy and authority as political leaders in control over their community.

In sum, the social and political position of the chiefs enabled them to resist or support implementation of institutional reforms in the sample cases of this research. They did this by relying on community-embedded institutions and practices (e.g., funeral rites) to enforce state-led policies (the 5% levy). Some chiefs resorted to state institutional structures (the police and courts) alongside traditional governance structures to enforce state policies. Similarly, their interference with the water and sanitation management teams was not always to object to their establishment; they also used their powers and authority to control who became a member. Chiefs accepted the management teams' activities as long as these coincided with their own preferences and interests and as long as the people occupying positions in the management teams could be trusted and controlled.

7.3 Displaying entrepreneurship: The role of state actors

This section examines the display of entrepreneurial characteristics by NORST and CWSA. These state actors moved to resolve challenges in the operation and management of some of the water supply systems. The activities referred to were described in chapter 6 (section 6.2).

Chapter 3 defined a policy entrepreneur as an actor with the capacity to identify a problem and use innovative strategies and practices to resolve it. Policy entrepreneurs use their command over resources, such as time, reputation, knowledge, information and financial resources, to engage others in return for a benefit (Kingdon 2002, Schneider and Teske 1992) or to change an established way of doing things (Mintrom and Norman 2009).

Chapter 6 outlined strategies adopted by CWSA and NORST towards finding solutions to challenges of poor management of the water supply system by local water actors. A mismatch between the capacities of local water actors and their expected roles and responsibilities, a lack of

commitment and support, and power struggles among local actors affected their management of the water system. This paved the way for state actor intervention. Among the strategies adopted by state actors to solve the challenges that had arisen in water system management was to change the management model from community-based to private-based management. An important question here is to what extent did the activities of state actors make them institutional entrepreneurs or change agents. As read in chapter 6, state actors were required to monitor and coordinate water activities and to provide technical assistance to local water actors. However, state actors were not supposed to impose their own decisions on local actors.

Nonetheless, state actors used their position as experts with knowledge and technical expertise to control the process of finding solutions to the challenges facing some of the water systems. Nonetheless, it is important to note that NORST's engagement of private organisations to manage the water system in cases 5 and 6 was consistent with the institutional arrangements in place at the time. What makes the actions of NORST comparable to those of institutional entrepreneurs is the strategies NORST adopted to change institutional arrangements for water system management. First, NORST preferred Pumptech, disregarding procurement rules that stipulated competition in the selection of water management companies. In this regard, the behaviour of NORST can be likened to that of policy entrepreneurs. It advocated change in an established way of doing things, introducing innovation aimed at problem solving (Mintrom and Norman 2009: 649-650, Kingdon 2002, Ackrill and Kay 2011). As revealed in this study and consistent with Kingdon's (1995) description of policy entrepreneurs, state actors had particular resources they could draw upon to enable them to change procurement processes and recruit their preferred water organisation (Pumptech). Foremost among these resources were their intellectual ability, knowledge of policy matters, leadership position and credibility.

CWSA and NORST did provide grounds to justify their preference for Pumptech. First, Pumptech was said to have good knowledge of water issues in the region, which made them the favoured candidate rather than competitors. Secondly, Pumptech's experience in providing maintenance services and spare parts put them ahead of their peers. Thirdly, Pumptech was said to be familiar with the difficulties confronting the water systems and the circumstances under which private management was being sought,

which made it easier for state actors to change established ways of doing things. Finally, if Pumptech were chosen, CWSA and NORST could indirectly oversee events, ensuring that Pumptech did not take advantage of the capacity gap to cheat local water actors.

In cases 5 and 6, NORST used its position as technical advisor and financer of the water reforms to change institutional arrangements for water system management to a private-based approach and ensure selection of Pumptech for the contract (section 6.2). This included (i) allocating 5% of water revenue for monitoring purposes, (ii) ensuring that Pumptech maintained all existing water personnel irrespective of their capacity and skills and (iii) providing for performance agreement contracts which all water personnel had to sign to serve as a benchmark for future evaluation of their performance.

NORST's and CWSA's actions and strategies were informed by economic interests, specifically, to bridge the technical capacity gap so as to ensure efficient management of the water system. Nevertheless, further investigation revealed a direct link between NORST and the Canadian International Development Agency (CIDA). CIDA had financed the water project and thus had a huge stake in facilitating institutional change in the rural water sector. Failure to ensure successful implementation of the water reforms would mean failure of NORST and CWSA, given their central role as facilitators and experts in NCWSP implementation.

The urgency with which many communities in the region needed a safe water supply also meant that state actors and NORST felt a keen responsibility to ensure that the water systems did not break down prematurely. The actions taken by CWSA and NORST to find solutions to the challenges confronting the water sector were consistent with those observed by Sheingate (2003), who maintained that uncertainties and crises provide opportunities for actors to engage in creativity and change established ways of doing things (Mintrom and Norman 2009). The challenges confronting the water sector served as a window of opportunity (Hitman and Meijerink 2010) for NORST to orchestrate and convince other stakeholders – such as CWSA, the DAs and the water and sanitation management teams – of the importance of resolving the challenges. The lack of alternative safe water sources in cases 5 and 6 and past challenges in accessing water made water provision a sensitive issue in some beneficiary communities. Hence, these actors recognised that a breakdown of the water system would be a severe detriment to users. NORST and CWSA, therefore,

could not ignore the capacity gap and inefficiencies of local water actors. They felt compelled to move forward to find innovative solutions to the challenges confronting the water systems.

Important in processes of institutional change is actors' access to resources that enable them to display entrepreneurship and agency. NORST had access to resources including technical expertise, knowledge on policy matters, and finances to initiate solutions to inefficiencies in local actors' management of their water system (Kingdon 2002, Schneider and Teske 1992).

As read in chapter 6, CWSA was more proactive in suggesting solutions to challenges confronting the water sectors in cases 5 and 6 than in the other cases. Although cases 3 and 4 faced similar management challenges, private management was not an option here due to the absence of institutional entrepreneurs such as NORST pushing for changes in the way the water system was managed. In cases 5 and 6, the presence of NORST working for CIDA put this organisation in a position to influence and change other actors' perceptions. In short, the resources NORST commanded enabled it to convince other stakeholders to support institutional change in small town water supply system management.

These findings are consistent with those of Sotarauta (2009), who identified multiple forms of power of institutional entrepreneurs. Likewise, NORST used its official position to force others to act differently. It did this by relying on its own expert knowledge to convince key persons, particularly among the water and sanitation management teams, to change their perceptions of their roles and responsibilities. It also wielded financial resources, which it could access thanks to its connection with CIDA. Drawing on all these resources positioned NORST to facilitate and control processes of institutional change in the management of these water systems.

Although further evidence suggests that CWSA, the DAs and the water and sanitation management teams initially objected to private-based management, NORST as an international organisation and the main financier of the project used its influence and political connections to sway the deliberation processes and the kinds of change that emerged.

The activities of NORST resemble those described as policy entrepreneurship. Its actions are consistent with key characteristics of institutional entrepreneurs as change agents who support the creation of institutions

that are appropriate and aligned with their interests (Dacin et al. 2002: 47) and who act strategically to bring change (Jensen and Fersch 2016, Weik 2011). They do this by reconfiguring "an organisation's roles, responsibilities, structures, outputs, processes, systems, technology or other resources" (Buchanan and Badham 1999: 610).

NORST displayed institutional entrepreneurship by controlling and influencing other actors to collaborate and support new initiatives that would improve local water actors' capacity and ensure the efficient management of the water systems. Its position as the main technical advisor for implementation of the water programme meant that it had a keen interest in ensuring the NCWSP's successful implementation.

7.4 Displaying entrepreneurship: The role of local water actors

So far, this chapter has focused on how traditional actors, state actors and affiliate organisations mediated the challenges encountered in implementing the NCWSP. This section examines the entrepreneurial characteristics displayed by local water actors in relation to changing institutional arrangements for the management of the water supply system. The activities examined were described in chapter 6 (section 6.3).

Local water actors in this study include members of the water and sanitation management teams, water personnel and water vendors, though the water vendors will be discussed separately in the next section. Local water actors and their characteristics conform with the descriptions of policy entrepreneurs by Kingdon (2002) and Mintrom and Norman (2009). As observed in previous chapters, local water actors modified institutional arrangements in order to overcome the challenges they encountered in managing their water system.

As read in chapter 6 (section 6.3), a number of factors constrained local actors' capacity to manage their water system using the community-based approach. Among these factors were inadequate technical capacity and training, a lack of alternative water sources and urgent need for a new water supply facility, and the often unwieldy size of the water system under their care. Despite these constraints, local water actors maintained community-based approaches rather than resorting to private-based management of their water system. Yet, this affected the quality of the water services provided. For example, billing was inefficient and accounts for the

water distributed were incomplete, revenue was pilfered and water facilities experienced frequent breakdowns. To bridge the gap in technical capacity and resolve the challenges, local water actors in cases 3 and 4 drew on the technical skills and expertise of an external actor, ASTWO.

When do such initiatives by local water actors qualify them as policy entrepreneurs or institutional entrepreneurs? Local water actors modified existing institutional arrangements under community-based management to cope with the challenges they faced. Measures included tightening up financial practices by (i) adopting financial software that allowed local water actors to manage their daily financial records more professionally, (ii) making vendors sign performance agreements and (iii) sending vendor revenues to the bank on a daily basis and paying vendor allowances through the bank.

Consistent with the characteristics of policy entrepreneurs, local actors' capacity to modify the existing community-based management arrangements was possible thanks to their alliance with ASTWO. This network organisation demonstrated that the innovative institutional arrangements had worked for other ASTWO members. Local water actors embraced ASTWO's technical expertise and credibility in the field to convince opponents and supporters to back modifications of the given institutional arrangements.

Institutional entrepreneurs' ability to change institutional arrangements depends largely on their ability to mobilise supporters by forging new relationships with both opponents and supporters. As found in case 4, the inability of the water and sanitation management team to mobilise support from water personnel led to resistance to the modified arrangements. Ultimately, little innovation was introduced, particularly compared to case 3. Hence, institutional change in case 4 become path dependent with most of the inefficiencies persisting. For example, customer billing for water consumption remained infrequent (bills were sent 3-6 months after the fact), collection rates were low and water losses were substantial due to obsolete meters, which made it difficult to accurately determine how much water customers used.

Consistent with scholarship on institutional entrepreneurship, the ability of institutional entrepreneurs to activate change depends on their access to finances, information, expert knowledge, social networks and skills (Helmsing 2013:10, Campbell 2004, Kingdom 2002, Mintrom and Norman 2009).

Although the water and sanitation management teams in case 4 had access to new ideas from their network organisation (ASTWSO), the management teams' inability to get water personnel on their side hampered implementation. The institutional change literature, too, posits that when the perceived cost of change outweighs the expected benefits, actors are likely to resist change. This was indeed found among the water personnel in case 4. The gap or inefficiencies in the management of the water system benefitted the water personnel, hence their desire to maintain the status quo. The new software was not in their interest, as it could expose shoddy practices. They therefore resisted change.

The water personnel in case 4 may have had genuine concerns which prompted their resistance to the new software. Interviews, however, suggested that they did not have adequate knowledge and understanding of the new software to make an objective assessment. Besides, they were comfortable with the exiting institutional arrangements for accounting for water revenues. The new institutional arrangements would at the least be difficult for them to adopt, again leading to their resistance.

Consistent with Campbell (2004), mobilising supporters by forging new relationships and building successful coalitions (Meijerink and Huitema 2010) is an important means for institutional entrepreneurs to engage in institutional change. Whereas in case 3 the water personnel was committed and supportive of new institutional arrangements, in case 4 the management team was unable to convince the water personnel of the need for the change. Even though the local water actors in cases 3 and 4 were both exposed to new ideas and training by ASWTO, change was not automatic. Thus, collaboration and backing from both supporters and opponents appears to be necessary to forge and sustain institutional change (Campbell 2004).

The findings above allow us to recognise the different motivations of water personnel and the water and sanitation management teams in cases 3 and 4. This difference was key in determining the path of institutional change and the strategies adopted by these actors. Although both cases faced similar challenges in water system management, and both were exposed to the inputs of ASTWO, the degree and extent of innovation differed in each case. The innovations introduced in case 3 were more influential and drastic compared to those in case 4:

> We have made a lot of changes in the way we do things as a result of the training we continued to receive from the association. In the past, we never took our daily sales to the bank and records of vendors were poorly kept. Now we have a rule of keeping only 50 Ghana cedi. This has helped us to monitor daily revenues. We know how much money was collected for the day and which vendor is performing and those not doing well (Interview with water and sanitation management teams, case 3, Wiamaose, 30 July 2018).

Consistent with processes of institutional change, change can only take place within the boundaries of available resources and social circumstances. Actors respond to pressure for change by creating new institutional arrangements or modifying existing ones to better engage with the challenges arising from institutional or technological advances (Campbell 2004, 1997; Campbell et al. 1991). A problem can only get the attention of entrepreneurs if it reduces their power and resources.

Whereas most studies on institutional entrepreneurship argue that actors' access to and control over resources determines and influences their agency, this study found that the urgency with which a water supply system was needed and the availability of alternative water sources played an important role in determining the degree of actors' innovation and agency. Topographical conditions in case 4 made water access less of a challenge than in case 3. In case 4, hand-dug wells were available in some areas of the community, so the breakdown of the water system in the near future was not considered as problematic as in, for example, case 3, where alternative water sources were scarce. Thus, providing quality water services and improving performance was less of a priority among water personnel in case 4, compared to case 3. This finding corroborates the idea of Fligstein (2001), who suggested that the social skills of entrepreneurs matter less in a stable field. In times of crisis, however, the social skills of institutional entrepreneurs play an important role in amassing collaboration and support for new institutional arrangements (Fligstein 2001). Case 4 had a more stable water situation than case 3. A breakdown of the water facility in case 3 would be tantamount to a crisis, as users would have difficulty accessing an alternative source. Local water actors in case 3 therefore had a much keener interest in ensuring the professional management of the water system. Low revenue, water unaccounted for and a lack of accountability among vendors were likely to plunge the water system into crisis. This motivated local water actors' intervention to seek out and

introduce strategies to ameliorate institutional arrangements under community-based management.

The motivations and logic behind local water actors' activities, as case 3 demonstrates, are consistent with scholarship on institutional change. Local water actors were driven by a collective concern to introduce new measures for the management of their water system. The expected economic benefit motivated local water actors in case 3 to renegotiate the given institutional arrangements. In short, they sought to ensure the quality of water services, so that inhabitants could have uninterrupted access to potable water. The actions of the local water actors in case 3 are consistent with Long's (2000) argument that actors make use of conflicting priorities that are likely to constrain their actions by adjusting and developing ways to deal with life. They do this by adjusting their goals, altering their perceptions or reinforcing their interests.

The goals and aspirations of the water and sanitation management teams and water personnel in case 3 differed from those in case 4. While local water actors in case 3 pursued the visible common good of ensuring efficient management of the water system, the water personnel in case 4 were more concerned with their individual interests and the benefits they would lose if they supported the changes proposed by the water and sanitation management team.

Ensuring uninterrupted water supply was an urgent issue in case 3. In case 4, hand-dug wells were available, so water personnel could take professional management of the water system for granted. The water and sanitation management teams had their image to protect. The chiefs had entrusted them with the management of this important resource, and expected them to revive the water system from its deplorable state.

Economic considerations were not the only factors that informed actors' motivations. Social relationships, too, played a significant role in processes of institutional change. The capacity to initiate change was possible in case 3 because both the water and sanitation management team and water personnel shared a common interest in resolving challenges in managing the water system. In case 4, both actors had different interests. Water personnel were interested in preserving their individual economic benefits into the future, and were thus loath to embrace the new software for managing their financial records. The water and sanitation management team, on the other hand, wanted to preserve its professionalism by ensuring the efficient management of the system.

In sum, the actions of local water actors confirm key processes of institutional change and previous findings on the likelihood of institutional entrepreneurs emerging and engaging in institutional change. Actors within an existing institutional context, with their varied access to resources and motivations, informed actors' preferences and strategies in our cases. In case 3, the economic benefit of improved water services informed local water actors' strategies. This interest consequently triggered their entrepreneurship to avoid a situation in which the water system would likely break down in the future. The crisis that such a future breakdown would represent triggered a quest to find innovative ways to safeguard the water system. In case 4, local conditions were such that water was not an urgent issue. Water system management therefore did not demand the full attention and interest of local water actors. This led them to resist changes proposed by the water and sanitation management team.

7.5 Displaying institutional entrepreneurship: Role of water vendors

The discussion thus far has examined how traditional, state and local water actors engaged in different practices to reduce the challenges that arose in managing their water supply system. This section looks at the activities of vendors in relation to the day-to-day management of the public standpipes. The activities discussed are those described in chapter 6 (section 6.4).

Vendors are important actors in direct contact with water users. Notwithstanding this, the NCWSP policy guidelines are ambiguous on how vendors are to be recruited and trained. Training of vendors is an important precondition for vendors to be familiar with their role, responsibilities and the expectations accompanying their position.

Management of standpipes under the NCWSP demands some knowledge and understanding of how to calculate daily revenue based on the quantity of water sold. Each public standpipe has a meter to monitor the quantity of water distributed and revenue expected. However, as read in previous chapters, most vendors were illiterate, without formal education or training. This constrained their capacity to manage the public standpipes, leading to discrepancies between the revenues expected and revenues actually declared by the vendors. This produced tension and conflicts between revenue collectors and vendors regarding the revenues

declared. To make up for the discrepancies, vendors had to forfeit their commission or use part of their commission to resolve any shortfalls.

While discrepancies between expected and declared revenues informed vendors' actions in cases 3, 4, 5 and 6, low demand for water influenced vendors' actions and practices in cases 1 and 2. In these latter two cases, they had to adopt strategies to supplement their income. Vendors indulged in various practices to make up for the shortfall in revenues. This included adjusting bucket sizes, revising the amounts that customers had to pay for water and forcing users to pay extra for water spillage. Some adjusted opening and closing times of standpipes and even refused to open the standpipes for days (section 6.4.1). A number of scholars have argued that institutional entrepreneurs' access to resources such as power, social position, information, expert knowledge and existing institutions informs their actions (Campbell 2004, Helmsing 2013, Kingdon 2002, Giddens 1984, Cleaver 2002). Nonetheless, this study found that vendors, compared to other actors who engaged in entrepreneurship, had fewer resources to engage in institutional change. The resource constraints they faced contradicts the proposition from the literature on access to resources as being a key determining factor in institutional entrepreneurship. Evidence from the current study indicates that the choices and practices that vendors adopted to mitigate the technological challenges they faced (mainly the water meters) were contingent on (i) the urgency with which water resources were required and (ii) demand for public standpipe water.

Thus the physical characteristics of water resources, that is, their safety and availability, influenced vendor strategies to mitigate the challenges of low income and low commission. Scarcity and non-availability of alternative water sources made water an urgent need in case 3. This provided opportunity for vendors in that community to indulge in practices such as adjusting bucket sizes and tariffs. This was because no alternative sources were available, which took away users' negotiation powers. Users could not demand fairness. They still fetched water, even if they were unhappy with the vendor's actions. Users would be worse off if they refused to pay the extra. They would then have to travel 35 minutes to an hour to fetch water. That cost outweighed the extra coins and other unfair practices of vendors. While the practices adopted by the vendors in case 3 were sustainable, it would be challenging for vendors in cases 1 and 2 to engage in the same. Manipulating opening hours was a legitimate and acceptable practice among vendors in cases 1 and 2. Users in these communities

could either wait for the vendor to open the tap or opt for another alternative source.

However, vendors in case 3 could not be lax with punctuality. Scott (2001), too, maintained that actors can only make use of what it is available to give their actions legitimacy. The legitimacy aspect of change is that new practices should fit into the regulative and normative institutional environment. Past experiences with difficult water access compounded by difficult-to-traverse landscape and large distances to alternative water sources meant that vendors' punctuality in opening the public tap was an important issue. It would therefore be unacceptable for vendors in case 3 to engage in practices such as manipulating opening times or being lax with punctuality. Both vendors and users valued punctuality in that community, and vendors adhered strictly to opening times (see figure 6.2). Consistent with other scholarship on institutional change and organisational studies, practices that actors can employ must be acceptable and legitimate and must fit within the local social and institutional context (Campbell 2004). In cases 3 and 5, the sensitive nature of water issues made it unacceptable for vendors to engage in practices such as manipulating opening hours because of the consequences on users. Vendors opted for practices that were acceptable and sustainable, such as adjusting bucket sizes and tariffs, with few being lax with punctuality (section 6.4.1). In cases 1 and 2, demand for water was already low, so adjusting bucket sizes and making users pay more were not viable options.

Practices adopted by vendors confirm Beckert's (1999: 786, 2003) view on institutional entrepreneurs as reflective while at the same time finding alternative solutions that are aligned with their interests. Interviews with the vendors suggest that they did not just engage in practices but weighed the consequences of their actions before embarking on a specific course:

> I cannot just close the tap and leave people stranded. They will complain to the authorities and my appointment will be terminated. I have signed a contract with the water personnel. They are strict and I cannot take things for granted (Vendor, case 3, Wiamoase, 30 July 2015).

This is not to imply that vendors were punctual in the rest of the cases. There was evidence of vendors' unreliability in cases 3, 4 and 5. This further confirms that vendors' ability to engage in particular practices is influenced by their underlying social realities and circumstances. In addition,

vendors' motivations and the logic behind their actions influence what they do. In both scenarios, vendors' priority is altering institutional arrangements in order to enhance their own economic performance (Beckert 1999, Jensen and Fersch 2016, Weik 2011). In short, they display their agency by creating new institutional arrangements that are appropriate and aligned with their economic interests (Dorado 2005, Dacin et al. 2002: 47).

An economic rationale informed vendors' interpretation of their problems and potential solutions. As observed above, the actions of vendors in cases 1, 2 and 3 were mainly economically motivated. Inadequate information, understanding and training on how to read and manage the water meters created tension between vendors and revenue collectors, which led some vendors to lose their daily commission. Findings from this research indicate that vendors' adjustment of bucket sizes and making users pay extra, as well as their adjusting opening and closing times, was done with the sole objective of maximising their expected earnings or commission.

A considerable amount of the institutional entrepreneurship literature pays particular attention to the conflicting and contradictory elements inherent in the design of institutions. These factors, as argued by Beckert (1999, 2003), trigger actors' agency and open the way for contending interpretations and variations in enforcement. For example, as found in this study, the water meters served as a control device with which the local water actors could monitor the vendors. Granted that water meters do not necessarily lead to losses. However, in this case due to the inability of the vendors to read the meters because of their bounded rationally, there was a certain inevitability that they would act incorrectly in managing the public standpipes. To address this challenge, vendors engaged in the abovementioned practices, which differed from the given institutional arrangements.

At the same time it is important to note that vendors may feign ignorance in order to avoid such controls. This is consistent with principal-agent theory, which postulates agents as taking advantage of the principal's weakness to escape responsibilities.

Notwithstanding the above, the economic explanation given so far fails to clarify why other water vendors, for example, in cases 5 and 6, did not change the given institutional arrangements. They followed the set rules governing management of the public standpipes. Perhaps they recognised cheating as an effective strategy for economic gain in the short term, but sensed that if users discovered wrongdoings the vendor would lose

customers or their job. Hence, in the end it would not pay to cheat. The difference between vendors may lie in their different risk assessments, regarding their options for managing the challenges encountered.

Vendors' responses to the challenges that arose in managing the standpipes in cases 5 and 6 were motivated by moral and cultural reasons. For example, most of these vendors refused to adjust the institutional arrangement, expressing a sense of moral obligation and social responsibility. These vendors feared jeopardising their relationships with their neighbours and the rest of the community (Campbell 2004, Cleaver 2012, Schneider and Teske 1992). March and Olsen (2006) referred to such an attitude as informed by the values and identity (the logic of appropriateness) of the actors involved. This is the symbolic part of scripts, cultural values and schemes which shapes actors interpretations and understanding of things. For example, scarcity and past struggles for water made it unacceptable for some vendors to deny users access to water, even though it may have inconvenienced the vendor.

The communal set-up in cases 5 and 6 was embedded in personal relationships involving family ties and networks. The vendors likely had some relationship with the majority of people who purchased water from them. These relationships between vendors and users went beyond the water transaction. They reached into extended family relationships. Denying users access to water would not be perceived as the right way of dealing with extended family and maintaining kinship ties. Such values go beyond economic benefits. Due to the absence of alternative water sources and the difficult topography, vendors needed to be punctual and not deny anyone water. Given this situation, most vendors were reluctant to engage in practices that would go against users' interests.

The evidence presented in this chapter is generally consistent with other studies demonstrating that economic gains do not always trigger entrepreneurship. Social relationships embedded in the moral and cultural frames influence actors in key ways. Identities, worldviews and what is considered the "right way of doing things" influence the actions that those involved ultimately take and the practices that are considered legitimate and acceptable (March and Olsen 2006, Olsen 1996). Thus, vendors felt morally obligated to ensure that everyone got water, even when the opportunity cost of opening the public standpipe outweighed the expected benefits of not opening. The "switching cost" involved in changing

institutions is high. Hence, engaging in new practices, unlike the established institutional arrangements, becomes less attractive.

7.6 Discussion

Entrepreneurship is not a heroic characteristic of actors. The study of entrepreneurship centres on how individuals or groups of people propel or block institutional change. It is interested in understanding how institutional entrepreneurs resist, facilitate and modify institutional arrangements. The key concern of the current study is the processes by which entrepreneurship takes shape. What factors motivate or trigger actors' entrepreneurship and innovation? We are also interested in how actors' access to resources constrains or enables the strategies or practices they choose to navigate the challenges of institutional and technological change that they face.

The discussion in this chapter discerns two main groups of actors displaying some form of entrepreneurship. The first category is the traditional actors, comparable to Sheingate's (2003) political entrepreneurs. This type of entrepreneurs consists of resourceful and opportunistic leaders. In the cases studied, their skilful manipulation of events had transformative effects on policies. The second category of entrepreneurs is state and local water actors, comparable to Kingdon's (2002) and Mintrom and Norman's (2009) policy entrepreneurs and Schneider's (1992) public entrepreneurs. This category of actors is willing to invest their resources – knowledge, skills and finances – to change an established way of doing things for a future return, while also engaging others towards solving problems (Schneider and Teske 1992: 741).

These actors display the features and activities of entrepreneurship. With our examination, we delved into how structural factors influenced the kinds of strategies they utilised to resolve institutional challenges or promote their interests. Nevertheless, these actors' activities do not fall strictly into the political or policy entrepreneurship categorisation, nor can they be classified as one particular type of actor. Unlike other studies, the current research found that the characteristics displayed by each actor were often blurred. This brings to light a foremost criticism of scholarship on entrepreneurship; that is, the fact that a proliferation of terms are in use to describe the same actors engaged in institutional change (Weik 2011: 466).

Despite the differences observed, a common thread across the different types of entrepreneurship is the use of resources to promote innovation or to resolve a problem hoping for a future return (Galanti 2018). Similarly, this study found that actors – both the chiefs and state and local water actors – had an interest in particular institutional arrangements and sufficient resources to resist, facilitate or transform existing ones (Maguire et al. 2004, DiMaggio 1988).

For example, chiefs were not key policymakers or implementers, yet they played an active part in enforcing implementation of the 5% levy. The social position of the chiefs enabled them to change the direction of policy implementation. Chiefs are social leaders. This allowed them to use their position to manipulate implementation of the NCWSP, such as by supporting payment of the 5% levy or frustrating the composition and activities of the water and sanitation management teams. The chiefs use of their social position to promote and enforce implementation of the 5% can be seen as positive in this instance. However, their use of the same institutions to impede the working of the water and sanitation management teams could be construed otherwise.

The current study found inconsistency in policy guidelines with regard to acknowledgement of the chiefs' role as an important development agent. This is part of what triggered their entrepreneurship. That is, the agential characteristics of the chiefs were activated not because they were skilful in manipulating events, but rather because of the relevance of their past and existing position as an important development agent. This position gave them a pathway to influence the process of water reform implementation. Similar to Mantzavinos and colleagues (2004), the current study argues that informal institutions that supported collective action enabled some chiefs to activate their agency. For example, the NCWSP by laws excluded chiefs as members of the water and sanitation management teams; this contradicted and challenged the chiefs' authority and leadership. This prompted or created conditions for their entrepreneurship to emerge. Chiefs who felt threatened moved to oppose persons whose activities did not resonate with their own (the chiefs') interests. The behaviour of these chiefs points us to the anthropological literature which debates the inclusion of chiefs in development programmes and institutional reforms. The question is whether such involvement is merited in order to guarantee the success of a programme (Elwert and Bierschenk 1988: 102, Fuest 2006: 40).

Consistent with the process of bricolage, the chiefs justified their actions based on different attributes, such as power, identity and kinship, which came with their social position. They fell back on existing customs and cultural practices, invoking the legitimacy bestowed on them through tradition (Giddens 1984; Arce and Long 2000; Cleaver 2001, 2012, 2002; Hodgson 2003). Their position made institutional changes possible, as their role as main enforcers of community rules enabled them to promote or resist implementation of specific institutional arrangements in which they had an interest.

Whereas some chiefs took advantage of their position to support or resist institutional change, there are shreds of evidence suggesting that the social position of the chiefs may also have constrained their ability to engage in entrepreneurship. In other words, the social position of chiefs did not always enable entrepreneurship. For instance, the absence of centralised structures for local decision-making in cases 5 and 6 enabled the water and sanitation management team to be easily embedded in local structures. This prevented the chiefs from interrupting in the management teams' activities, unlike what was observed in cases 2, 3 and 4. In these latter cases, the chiefs did influence the activities of the water and sanitation management teams. In other words, in cases 5 and 6 the chiefs' social position prevented them from reinforcing their power and controlling decision-making processes.

A possible explanation for the low agency of the chiefs in cases 5 and 6 is the traditional governance structure in the northern part of Ghana. In these cases traditional authority was more decentralised than in the rest of the cases. More decentralised decision-making meant that the chiefs in cases 5 and 6 had less power than in the cases where decision-making was vertical and stratified according to power, social status and economic rank.[2] These latter chiefs had more power and control over their citizens, which explains their greater influence and entrepreneurship in cases 1, 2, 3 and 4, compared to cases 5 and 6.

We could also ask in what way the local context constrained the chiefs' ability to interfere with the activities and membership of the water and sanitation management teams. Evidence found in the current work suggests that in case 5, most members of the water and sanitation management team occupied other positions as well, and had access to more information and knowledge about the NCWSP. In addition, some team members were more educated than the chiefs, which allowed them to

understand their role and responsibilities. This put the water and sanitation management teams in an advantageous position, which they used to resist interference from the public, especially the chiefs. It is important to note that the chiefs were disadvantaged by their lack of access to information and knowledge about the operations of the water and sanitation management teams. This made it difficult for them to penetrate the management team memberships and control decisions about the water system.

Evidence from case 5 contradicts studies arguing that the social position of the chiefs enables them to exert their agency. As shown, the chiefs' ability to use their social position required that other conditions also be in place, such as knowledge and social skills. These other conditions may be equally important to enable change. We also learned that the practices adopted by the chiefs must be normatively acceptable and aligned with the cognitive frames of both the chiefs and the rest of the interested players. Although the chiefs in case 5 were unhappy about the activities of the water and sanitation management team, they could not make changes to its membership, though this was done in cases 2, 3 and 4.

Evidence from case 6 shows that forging mutual relations and collaboration between the chiefs and the water and sanitation management team provided an avenue for traditional actors to make themselves relevant in the day-to-day management of the water system. As a result, no power struggle arose between the chiefs and the water and sanitation management team in case 6, unlike in case 5.

Furthermore, in case 6 the water supply system was in crisis. Half of the pumps were not working. This demanded a unified response, leading to the collaboration and cooperation between the chiefs and the water and sanitation management team. Case 5 did not "benefit" from the same challenges with regard to water flows. The chiefs and water and sanitation management team appeared unified in case 6, as they needed the support of state actors to help them find solutions to the frequent water shortages due to the rationing of water. The activities of the chiefs in all of the cases demonstrates that social position is a necessary precondition to enable agency, but varying motivations, logics and interests directed the actions that the chiefs ultimately took.

While the chiefs engaged in entrepreneurship to institutionalise community participation in water activities, state and local water actors participated in entrepreneurship to resolve challenges in the management of the water supply system. Inconsistency between the needed institutional

capacity and the actual capacity of local water actors stimulated such entrepreneurship. The size of the water system made it challenging for local water actors to manage their water system using community-based approaches. Hence, the need arose for local water actors to change the given institutional arrangements to better suit local needs and conditions. Local water actors' exposure to ASTWO brought new skills and training, assisting them in managing the challenges they were facing on a daily basis.

State actors altered community-based approaches for the management of the water systems, instituting private-based management to ensure efficient operations. This was possibly a result of NORST's ability to build a coalition with other actors -- particularly CWSA and the DAs – in support of its new ideas. Furthermore, in cases 5 and 6, NORST exploited the opportunity offered by inefficiencies in local water actors' management of their water system to negotiate changes. The actions of water actors in cases 3 and 4, on one hand, and in cases 5 and 6, on the other hand, corroborate Fligstein's (2001) notion that in times of crisis, the social skills of institutional entrepreneurs play an important role in amassing collaboration and support for new institutional arrangements. Disruptive events such as technological challenges and regulatory changes lead to tension, which then provides the stimuli for entrepreneurs to emerge and engage in change.

The evidence collaborates key characteristics of institutional entrepreneurs as change agents. As change agents, these actors facilitated, resisted and modified institutional arrangements in ways that were appropriate and aligned with their interests (Dacin et al. 2002: 47) and they acted strategically to bring change (Jensen and Fersch 2016, Weik 2011). They did this by reconfiguring "an organisation's roles, responsibilities, structures and institutional arrangements or other resources" (Buchanan and Badham 1999: 610). As change agents, they mobilised the necessary resources to be able to effect the changes they sought (Jensen and Fersch 2016). They did so through the acquisition of power (Klein et al. 2010), as well as by motivating others to join them through what Fligstein (2001) described as social skills.

Most of the institutional entrepreneurship literature maintains that institutional entrepreneurs' social and political position, social skills, social network, finances and expert knowledge enable entrepreneurship. However, this study found that physical characteristics related to the availability of water resources determined the choices that institutional entrepreneurs

ultimately made. In all of the cases, the difficulty of accessing water and the availability or scarcity of alternative sources guided actors' agency.

In case 3, local water actors made use of their network (ASTWO) to introduce new institutional arrangements. This is consistent with Campbell's (2004) assertion that entrepreneurs' location and the extent to which they are exposed to new ideas determines whether drastic change can occur. Actors without access to such a network would be less likely to be privy to new ideas. Nonetheless, local water actors in case 4 were unable to apply the new knowledge and skills they acquired from the network to make transformative changes in the way they managed the water system, unlike in case 3. The availability of alternative water sources in some parts of the community meant that the efficient management of the water system was not as urgent an issue. Water personnel were therefore less motivated to find innovative ways of doing things. According to DiMaggio (1988: 15), changing institutions is expensive and requires the mobilisation of resources, interests and cooperation across a range of actors. This observation counters Campbell's (2004) argument that access to a network and new ideas triggers radical or evolutionary institutional change. The capacity of local water actors was generally a problem throughout the cases. However, in cases 3, 5 and 6, where alternative water sources were limited, more water actors were engaged in entrepreneurship, compared to the cases with more abundant alternative sources.

Likewise, the physical characteristics of water resources influenced the strategies vendors' employed to resolve the challenges they faced in managing public standpipes. Fligstein (2001) argued that actors without resources use institutions in unintended ways to create new institutions. Examination of the role of vendors suggests that the distribution of alternative water sources influenced the vendors' agency, leading them to modify institutional arrangements, deviating from the given institutional arrangements.

Nevertheless, the development of strategies and practices by which to engage in institutional entrepreneurship hinges on institutional entrepreneurs' motivations and interests. The findings in this study support the growing body of literature that views the motivations and logic of institutional entrepreneurs as a necessary condition to enable them to display agency and engage in entrepreneurship. Similarly, this chapter found that political and economic motives propelled actors to resist institutional arrangements (e.g., the given procedures for formation of the water and

sanitation management teams), to facilitate institutional arrangements (e.g., community payment of the 5% levy) and to modify institutional arrangements (e.g., water system management approach and rules on the public standpipes). The findings further support the idea that economic and political factors trigger the emergence of institutional entrepreneurship (March and Olsen 2006, Campbell 2004, Schneider and Teske 1992).

From an economic perspective (logic of instrumentality), actors were motivated to change the institutional arrangements or to engage in entrepreneurship based on expected economic benefits. These benefits included but were not limited to the following: reducing operational costs, finding solutions to technological challenges, dealing with accountability-related issues and responding to institutional and technical capacity-related challenges.

Finally, the current study found that actors' motivations were embedded in their ideologies, worldviews, norms, identities and cultural values, which therefore should also be considered key elements informing institutional entrepreneurs' actions and practices (Campbell 2004, Cleaver 2012, Long 2003, Leftwich 2010). These embedded institutions (or community-led institutions) may be taken for granted by policy actors, but have an influence on how actors interpret, understand and give meaning to events (March and Olsen 2006, Campbell 2004). They therefore play a part in directing the nature of the institutional change that is likely to ultimately emerge.

In sum, the current study supports the idea that economic benefits are not the only factor that activates institutional entrepreneurship. The social and cultural structures embedded in the local environment also play a key role in informing actors' decisions, practices and degree of entrepreneurship.

7.7 Conclusion

In NCWSP implementation, differences in local institutional contexts and in the demands of implementing actors determined whether actors displayed agency in engaging in bricolage or institutional entrepreneurship. Nevertheless, this study found that environmental constraints were necessary but not sufficient to trigger actors' entrepreneurship. The availability of and control over resources enabled entrepreneurship as well, but were also not sufficient to trigger big change. The physical characteristics

of the communities and nature of water resources available played an important role in influencing actors' agency and the extent to which they ultimately engaged in entrepreneurship. Urgent need for water triggered entrepreneurship and greater acceptance of change within the case study communities. In contexts where water was not an urgent need, the institutional reforms met more resistance. The extent to which actors could initiate or enforce changes was informed by economic, political and social interests, and the worldviews and ideologies of potential institutional entrepreneurs were also instrumental. Nevertheless, the extent to which actors could engage in change was dependent on their command over resources, such as technical capacity, social skills, social position, knowledge and programme information, networks and existing institutions. These resources played a key role in determining the kinds of change and practices entrepreneurs employed and the degree of change that was ultimately deemed permissible. These factors nevertheless were not the only determinants of agency. Actors without these resources also engaged in entrepreneurship. The availability of alternative water sources and the age and capacity of the water system, for example, were also factors determining whether institutional arrangements could be changed to serve actors' personal interests. In some cases, actors decided not to engage in change, for example, out of respect for the collective good or to maintain social relationships.

Notes

[1] Case 1a did not have a functioning chieftaincy lineage. The chief of the community served as the overseer of the community, holding it in trust for the chief of Abakrampa, an adjoining town.

[2] Cases 1, 2, 3 and 4 were located in the southern part of Ghana (i.e., they were Akans).

8 Conclusion: Understanding Processes of Institutional Change

8.1 Introduction

A global shift in water governance over the last two decades has led to institutional reforms in most developing countries, including Ghana. These institutional changes have moved decision-making processes away from the national level, putting them into the domain of a broader range of stakeholders at the local level. However, interactions across this range of actors have often led to divergence between policies as designed and actual practices. Well-intended reforms and strategies have failed to produce the desired results, and impacts of policies have been disappointing as a result of differences in the way actors interpret and implement institutional reforms. Why do actors implement institutional reforms differently despite their similar institutional context? This question is a major area of concern in policy and institutional change scholarship. It is also the focus of this thesis.

Several scholars have argued that the existing local social and institutional context constrains actors' ability to interpret and implement institutional changes, leading them to resist institutional change (Thelen 1999, Pierson 2000). Path dependence and diffusion are concepts used by institutionalists to explain why change tends to be incremental. Nevertheless, the analysis of institutions seldom specifies the processes by which actors arrive at their preferences and make their choices (Campbell 2004, North 1990, Campbell and Lindberg 1990). The current research has expanded on this area of study by exploring how actors changed institutions for governing small town water supply systems in actual practice in Ghana.

This research applied two related concepts (translation and bricolage) and one actor-based concept (institutional entrepreneurship) to trace how actors implemented the NCWSP. The research framework acknowledges both the constraining and enabling aspects of institutions. This framework

enabled us to examine how existing institutions provided the repertoire of actors' agency. In addition, I looked at the motivational factors and logic that informed actors' choices and practices, and how their control and access to resources informed the kinds of practices that were deemed cognitively and normatively acceptable and appropriate.

The main objective of this research was to explore differences in the actual implementation of the NCWSP across beneficiary communities. I sought to appreciate the role of actors who as institutional entrepreneurs enforced, renegotiated and changed institutions for governing small town water supply systems, often departing from policy guidelines and given arrangements. By understanding actor agency, we learned what motivated actors, and how they defined their interests. Through this process, we advanced our understanding of processes of institutional change. The specific objectives of the current research are reiterated below:

- to examine contextual factors that constrain or enable institutional change
- to explain how these changes occur in actual practice and what resources are employed to frustrate or promote institutional change
- to analyse the motivating factors and logic behind actors' abilities to emerge as institutional entrepreneurs and change institutional arrangements
- to explore ways in which the concepts of bricolage, translation and institutional entrepreneurship might contribute to understanding processes of institutional change

I selected six cases from three regions of Ghana: the Central, Ashanti and Northern regions. My aim was to understand the diversity of local responses and uncover implementation dynamics. A number of factors informed case selection: population size; physical characteristics and availability of water sources; distribution of water points; size of the water supply system; total amount of water supplied; and age of the water system.

This chapter presents my conclusions from the study as a whole. I pay particular attention to the findings and discussions from chapters 5, 6 and 7, to contribute to the field of institutional analysis. The research shows that the local social and institutional context constrained actors' understanding, interpretation and implementation of institutional changes in the water sector. The constraining factors, however, provided the means for

institutional entrepreneurs/translators/bricoleurs to find solutions to pressures for institutional and technological change under the NCWSP. Findings from this study reveal that the institutional and technical capacity of implementers, the physical characteristics and nature of the water resources available, knowledge and access to information on the water reforms, and the support and commitment of implementing actors determined the extent to which actors resisted or supported NCWSP implementation. Here I draw together and advance key arguments presented in this thesis on understanding processes by which institutions for governing water systems change. In so doing, I reflect on the cases and specific concepts, and discuss new empirical insights supporting or challenging concepts used in analysing the cases. I further reflect on the empirical findings in relation to the research framework and the contribution of the empirical findings to theory development on processes of institutional change. In short, I revisit the question of why institutional change often turns out to be gradual and incremental, as opposed to radical and abrupt. With these findings, I seek to contribute to understanding of why rural water sectors have not achieved much in relation to (i) user participation in system management, (ii) improved quality of water services and (iii) efficient management and maintenance of water systems. Finally, I look at the strengths and weakness of this research and implications for further study on the sustainable governance of rural water supply systems.

8.2 Summary of research findings

8.2.1 The role of local social and institutional contexts as drivers of institutional change

The first research question was "what contextual differences explain variations in the implementation of the NCWSP". In other words, can we explain the differences in implementation of the water reforms as being triggered by context-related factors? This study found that four related factors constrained actors' ability to translate and implement the NCWSP: institutional and technical capacity, knowledge and access to information on the water reforms, the nature and characteristics of the available water resources; and support and acceptance of the water project. Actors modified policy ideas to "fit their unique needs in relation to the context in which they found themselves" (Whittle et al. 2010: 20). This finding is consistent with other studies that also show that an actor's ability to

translate policies depends on the social and local institutional context (Dolowitz and Marsh 1996, Campbell 2004).

Notwithstanding the constraints imposed by the local context, the current study found that actors' local social and institutional context is a necessary element but not sufficient to trigger institutional change. One of the more significant findings emerging from this study is that the physical conditions and characteristics of the water resources available, and the extent to which water was an urgent need, triggered the actions and practices that actors ultimately employed.

Even though most users did not have access to information and were not knowledgeable about the NCWSP, evidence from this study indicates that actors' acceptance of the idea of the 5% levy depended on the urgency of their need for water (chapter 5).

Similarly, this study found that water being an urgent need triggered different practices among local water actors than those found where water was not an urgent issue (chapter 6). For example, state actors modified the institutional arrangements for private-based management in cases 5 and 6 in order to ensure the functionality of the water systems. Similarly, local water actors in case 3 modified institutional arrangements in order to resolve challenges that they encountered in managing their water system under community-based management.

Likewise, vendors' ability to change standpipe opening times, in cases 1 and 2, and to establish rules serving their own private interests instead of collective interests, in case 3, depended on the demand for water from the public standpipes and the availability of alternative water sources (chapter 6). However, an urgent need for water did not always lead to vendors' agency, as evidenced in cases 5 and 6 (chapter 6). Here, social relationships and kinship ties constrained actors' capacity to engage in practices that deviated from the given policies. Corroborating Campbell's (2004) results, this study found that internally built obstacles and the existing local social and institutional context cause actors to hesitate to engage in practices that contravene established institutional arrangements.

The framework adopted for this study emerged as very useful for explaining the evolutionary or gradual nature of institutional change, as it shed light on how actors operationalised policy ideas in different practices. Actors resisted change when it conflicted with the existing local social and institutional context or status quo. The application of the concept of

translation in this study provided a deeper understanding of how the local social and institutional context (like the urgency with which a new water system was needed) influenced actors' choices and the practices they employed. For example, while the urgent need for water stimulated actors to enforce new institutional arrangements and practices, in communities without such urgency, actors resisted institutional change. The concepts of institutional bricolage and institutional entrepreneurship shed additional light on how actors activated their agency and arrived at the practices they employed. This brings us to the second research question.

8.2.2 Towards gradual institutional change: The role of institutions

The second research question was "what practices do implementing actors engage in to find solutions to pressure for institutional and technological change". This study found that an actor's capacity to resist and modify institutional arrangements under the NCWSP was dependent on past events and existing institutions.

As read in chapter 5, the kinds of practices used by chiefs to enforce the 5% levy differed in all of the cases. In some circumstances, as in our sample cases 1b and 2, the chiefs applied community-embedded institutions. In others, as in case 4, chiefs relied on state organisations such as the courts and the police to support their efforts to enforce the 5% contribution. In yet other circumstances, as in case 1a, chiefs encouraged users to resist payment.

This study also found that the chiefs' capacity to change membership of the water and sanitation management teams was embedded in community-led institutions. The chiefs' capacity to influence membership of the water and sanitation management teams was informed by the past, as all water activities were previously under the chiefs' purview (chapter 4). Community-led institutions provided the means by which some chiefs were able to exercise their authority to reconstitute the water and sanitation management teams. The actions of these chiefs to form new water and sanitation management teams would henceforth be legitimate. In cases 1b, 2 and 3, the chiefs were motivated by a desire to reinforce their own leadership role and to ensure that citizens complied with community rules. Yet, we also found instances where the chiefs influenced institutional arrangements because they wanted to promote positive social

change, for example, ensuring that water actors were accountable to the citizenry. This was found particularly in case 4.

The current findings provide additional evidence of the role of history and existing institutions in influencing the configuration of actors' interests and the bargaining power they could bring to bear to resist, modify and support implementation of the NCWSP (Campbell 1997, 2004).

The role of community-embedded institutions in processes of institutional change

The finding that traditional actors drew on community-embedded institutions to resist the given processes for governing the water and sanitation management teams and to justify their support for the 5% levy add to the growing literature on bricolage.

This finding recalls Cleaver's (2012, 2002) description of bricolage as an "articulation and assertion of identities and cultural values" to resist imposed national policies. The capacity of the chiefs to frustrate programme implementation and promote institutional change was rooted in the customs and practices of the traditional governance system, which allowed chiefs to enforce and change community rules (Cleaver 2012, 2001, 2002; Cleaver and De Koning 2015). It also confirms bricolage as a key process in response to everyday challenges, in which the practices initiated by bricoleurs are often dynamic and characterised by unevenness and temporal intermittence. As Cleaver (2002, 2012) observed, the institutional arrangements invented were borrowed from existing institutions but also had to conform to routines or habitual ways of doing things.

Similarly actors' capacity to invoke community-embedded institutions provides additional evidence of Campbell's (1997, 2004) idea of symbolic bricolage. This study similarly found that the strategies adopted by some chiefs to promote the 5% levy and to resist the initial composition of the water and sanitation management teams, in cases 1, 2, 3 and 4, were consistent with existing institutional practices. After all, chiefs controlled the social, religious, administrative and judiciary functions of their community. In addition, they were in charge of grassroots governance and represented every member of the community; no one could question the traditions that were the chiefs' source of power (Bamfo 2000). This power was a resource that legitimised their activities, such as enforcement of rules and resolution of disputes (Agyenim 2011).

Similarly, in cases 5 and 6, vendors refused to modify the given institutional arrangements, despite the challenges they encountered in managing the public standpipes. In this, their actions were consistent with their worldview, which emphasised the importance of maintaining good relationships with everyone. Preventing people from accessing water was inconsistent with the value of community cohesion. In both instances, actors engaged in practices that they deemed acceptable and legitimate.

The findings from the current study clearly support the relevance of the local social and institutional context in enabling actors to display agency in resisting or supporting the implementation of externally given policies. Even though the chiefs were not part of the given implementation process, they used their social and political position to change the direction of national policies (Schneider and Teske 1992: 741). This study's empirical findings thus confirm the proposition found in much of the water literature that neglect of community-embedded institutions and endogenously negotiated processes is a foremost reason for the challenges facing ongoing interventions in the water sector (Molle 2005, Rusca et al. 2015).

Modifying institutional arrangements: The role of state-led institutions

As demonstrated in this study, the capacity of state and local water actors to modify institutional arrangements provides additional evidence of Campbell's (2004, 1997) notion of substantive bricolage. As read in chapter 6, to ensure the efficient management of the water systems, local water actors supported community management (in cases 3 and 4) and state actors supported private management (in cases 5 and 6).

In both scenarios, we observed that water actors' capacity to modify institutional arrangements involved recombination of existing institutional principles and practices to address the challenges they faced in water system management. Similarly, in cases 1, 2 and 3, vendors' capacity to modify the institutional arrangements given for managing the public standpipes was linked to the challenges they faced in management of the standpipes.

The practices of water actors are consist with Campbell's (2004) description of substantive bricolage and come close to Cleaver's (2012) concept of "alteration". Nonetheless, I do not perceive water actors' practices as bricolage. Indeed, we can only infer an activity to be bricolage when community-embedded institutions are invoked and practices employed that are locally culturally acceptable and legitimate. For example, the use

of funeral rites was not possible in some communities. In case 4, inhabitants would have resisted such a strategy, unlike those in cases 1b and 2, where it was easily accepted and successfully applied. Similarly, chiefs in case 5, for example, could not dissolve the water and sanitation management team, because social relationships here frowned upon interference by chiefs in the governance of water resources.

At the same time, both community-based management and private-based management were deemed acceptable ways to manage water systems under the NCWSP. Nonetheless, this study found that actors modified these existing institutional arrangements to better fit local circumstances. The activities of local water actors were in part a response to implementation challenges, which required them to employ innovative strategies to surmount the hurdles they faced.

The empirical findings from this study further lend credence to a concern raised in the policy implementation literature; that is, that implementation challenges typically arise at the micro level (Matland 1995, Booth 2009, Andrews 2013). These challenges stimulate street-level bureaucrats to engage in a variety of practices and strategies to circumvent the obstacles they encounter in the course of implementation (Maynard-Moody et al. 1990). However, while acknowledging that policy implementation requires policy adaptation, we must also recognise that street-level bureaucrats sometimes take advantage of challenges to cater to their own interests, which explains why institutional reforms may be unable to achieve their intended objectives (Lindblom 1959).

The concept of bricolage enables us to better understand actor agency. Nevertheless, the motivations and logics informing actors' choices are less visible in the concept of bricolage compared to institutional entrepreneurship. Application of the notion of institutional entrepreneurship requires us to pursue an explicit account of the motivations and resources that allow entrepreneurs to innovate or engage in bricolage. As shown in the framework for this research, the conceptualisation of actors as institutional entrepreneurs sheds more light on actors' motivations and resources to engage in institutional change. In short, institutional entrepreneurship provides greater clarity on the characteristics of actors and the resources they hold that allow them to engage in bricolage or entrepreneurship.

8.2.3 The role of institutional entrepreneurs in understanding processes of institutional change

The third research question focuses on the change agents. It asks, "in what ways do institutional entrepreneurs engage in institutional change, and what are their motivations for changing institutional arrangements under the NCWSP". This study found three types of actors involved in institutional entrepreneurship. Their characteristics resemble those of political and policy entrepreneurs. However, this study defines institutional entrepreneurs as actors involved in the process of institutional change.

Role of the social and political positions of actors in enabling institutional entrepreneurship

This study found that actors' capacity to emerge as institutional entrepreneurs and engage in institutional entrepreneurship or bricolage was reliant on their access to resources. The ability of chiefs to emerge as an institutional entrepreneur or bricoleur hinged on the position the chiefs occupied as social and political leaders of their community. That position of social and political leadership made it acceptable and legitimate, for example, for chiefs to invoke community-led institutions to enforce the 5% levy and resist the rules governing composition of the water and sanitation management teams. The findings, therefore, suggest that the chiefs' control over creation and enforcement of community-led institutions allowed them to invoke these institutions to influence institutional reforms in water governance.

However, this study also demonstrated that the social position of the chiefs did not always enable them to influence decision-making processes. In case 4, for example, the chiefs had to rely on state institutions to enforce the 5% levy. In case 5, the chiefs were unable to influence the composition of the water and sanitation management team because the members of the team knew more about the team members' role and responsibilities. This undermined the chiefs' efforts to use their leadership position to influence the management team. This finding enhances our understanding of the relationship between actors' access to information and their ability to enforce rules, monitor behaviour and limit elite appropriation of institutional reforms (Platteau and Abraham 2002: 1). The activities of the chiefs in case 2 provide further evidence of this. In both cases 2 and 4, challenges that arose in the early stages of the project allowed chiefs access to information and knowledge about the NCWSP, which enabled these chiefs to

exercise entrepreneurship in changing the composition of the water and sanitation management teams.

Nonetheless, we must interpret these findings with caution. In cases 1, 2, 3 and 4, the chiefs' ability to influence the water and sanitation management teams stemmed largely from the governance structures in place in the beneficiary communities, which were vertical and stratified according to power, social status and economic rank (Elwert and Bierschenk 1988: 102). Because of unequal power relations, chiefs had control over development initiatives, with less resistance from the citizenry. In contrast, in cases 5 and 6, the governance structure was decentralised and grounded on family ties and interpersonal relationships. In case 5, the inability of the chiefs to interfere with the composition of the water and sanitation management teams stemmed from existing interpersonal relationships built on trust and peaceful coexistence. These existing norms constrained chiefs' interference in the activities of the water and sanitation management teams.

Herein, we find additional evidence of the role of existing institutions in providing the social scripts that actors follow when defining problems and interests and responding to pressures for institutional change (March and Olsen 1983; Jepperson 1991: 46; Campbell 1997, 2004).

Roles of networks and expert knowledge in enabling institutional entrepreneurship

This study provides additional evidence of institutional entrepreneurs drawing on networks and expert knowledge to engage in institutional entrepreneurship. In cases 5 and 6, NORST's capacity to mobilise support from other stakeholders to introduce private management was enhanced by the organisation's position as the main financier of the water project. Moreover, NORST had expert knowledge on the implementation of the water project. This provided it the credibility it needed to push for changes in existing institutional arrangements.

Similarly, in case 3, local water actors' capacity to modify institutional arrangements was facilitated by support provided by external water actors, such as the network organisation ASTWO, which offered the needed technical and institutional backstopping. Moreover, the existing institutional arrangements under community-based management were modified to enable local water actors to manage the challenges they faced when operating the water system under the community-based approach. ASTWO's presence provided a means for water actors to engage in entrepreneurship.

This study's findings, however, challenge the idea that it is merely actors' access to resources that enables institutional entrepreneurship. Even though local water actors in case 4 had access to ASTWO's expert knowledge and training, existing institutional arrangements nevertheless remained unchanged. Access to resources is necessary to trigger institutional entrepreneurship but it is not sufficient to stimulate actors to engage in entrepreneurship. The extent to which local water actors engage in institutional change and the choices and practices they adopt in the process must be consistent with their motivations and existing organisational norms and cultural values.

8.2.4 Motivations and logic of entrepreneurs: Towards a gradual institutional change

The final research question asks, "how can we account for the motivating factors and logic behind institutional entrepreneurs' practices and actions". In short, the current research provides additional evidence of the enabling and constraining characteristics of institutions (e.g., DiMaggio and Powell 1991, Hirsch and Lounsbury 1997, Hirsch 1997, Stinchcombe 1996, Campbell 1998).

The enabling aspects of institutions help explain how actors resolve the everyday challenges arising from technological and institutional change. This study found that omission of the chiefs as a key actor in NCWSP implementation did not prevent them from interfering in decision-making processes. Political motivations determined the extent that the chiefs promoted implementation of the 5% levy and sought to influence who became a member of the water and sanitation management teams. The chiefs' role as a social and political leader motivated them to participate in implementation of the new policy. By engaging in the institutional reform process, the chiefs reinforced their power and control over the citizenry. They did this by using their social position to promote collective action, as is consistent with their traditional role and responsibilities. This finding adds to the growing literature confirming the need for decision makers to pay attention to issues of local power and politics in the design of institutional reforms (Booth 2009, Cleaver et al. 2014).

This study also provides additional evidence on the role of economic concerns in motivating actors to engage in entrepreneurship. Though the actions of the chiefs were found to be motivated by political

considerations, some chiefs did resort to their political position not to promote the collective good of the community but to serve their own economic and personal interests. Although this can be debated, in cases 2, 3 and 4 allegations and evidence were found suggesting that chiefs used their position to dissolve water and sanitation management teams in order to install their own representatives. Having their own delegates on the water and sanitation management teams would enable these chiefs to control water system management.

Economic considerations motivated most vendors' practices. Some cheated users or manipulated opening times in order to improve daily commissions and income. Similarly, local water actors' (in cases 3 and 4) decided to maintain community management in order to safeguard water revenues and also to assure that the community would remain in control over its water system. Likewise, state actors' interference in water system management was motivated by economic considerations, geared towards protecting the investment made in the water facility and improving the quality of water services. The logic behind the actions of both actors was to reduce production costs by mimicking successful institutional arrangements in neighbouring communities.

Findings of this study further confirm the conclusion of Gómez (2008) that actors' moral values, worldviews and identities drive institutional change. In cases 5 and 6, vendors' propensity to cheat (or not) and to manipulate opening and closing times was informed by the need to maintain good social relationships and kinship ties. Similarly, chiefs' inability to interfere in the composition of water and sanitation management teams, as in case 5, was informed by social values and norms that made it unacceptable for traditional actors to interfere in the activities of individuals in leadership positions. These are examples of the kinds of cultural values and norms that shape actors' interpretations and understanding of events, consequently influencing the choices actors make and the practices they embrace.

Nonetheless, this study also established that more than political, economic and moral considerations are at work in guiding actors' motivations. At times, actors were motivated by a combination of political, economic and embedded values. The type and nature of the resources in play and the sector under study seem to have influenced actors' choices and practices. This study demonstrates that an urgent need for water can hasten actors to display agency and pursue innovations. In such situations, both

economic considerations and moral responsibilities may be at work to propel actors to look for ways to prevent a crisis. A looming threat of water scarcity places a huge responsibility on water actors to ensure that the water supply is reliable, available and that users receive water in sufficient quantities and quality.

Such an account of actors' motivations leads us to focus more on the enabling aspect of institutions, when it overrides the constraining aspect. That is, it directs our attention to what actors ultimately do to resolve the everyday challenges they face in maintaining and sustaining institutions, despite the constraints imposed by their immediate environment. This study found that the motivations of actors and their access to and control over resources determined the kinds of practices and strategies they employed. Factoring actor agency into our analysis of institutional change (see, e.g., Friedland and Alfred 1991: 254, Hay 2002, McAnulla 2005, Giddens 1979, Leftwich 2010) thus helps us to understand reasons for actors' choices and the practices they adopt to resolve implementation challenges (DiMaggio and Powell 1991, Scott and Meyer 1994, Steinmo and Thelen 1992).

In sum, the empirical findings of this study provide additional evidence with respect to the role of actors and their capacity to influence and transform institutional contexts. This study, however, suggests that the extent to which actors exhibit specific entrepreneurial characteristics is dependent not only on the characteristics, motivations and resources at their disposal, as suggested in the institutional entrepreneurship literature. Rather, the nature of the sector under study (e.g., the influence of biophysical characteristics and the nature and availability of water resources) directs institutional entrepreneurs' choices and the strategies they adopt to resist or facilitate institutional change or to modify existing institutional arrangements.

8.3 Understanding processes of institutional change

In view of the above empirical findings, can we conclude that translation, bricolage and entrepreneurship contribute towards understanding processes of institutional change? Using the implementation of the NCWSP I have shown that institutional reforms in the water sector are slow and evolutionary in nature because of the presence of existing institutions and the lingering influence of past events. Yet, these institutions and resources

are more than just constraints; they also provide actors the means with which to frustrate, support and modify existing institutional arrangements, hence making institutional change gradual and path dependent.

This study used the inter-related concepts of translation, bricolage and institutional entrepreneurship to comprehensively analyse the institutional change process. Findings from this study indicate that each concept on its own is inadequate to explain actors' choices and preferences. By analysing these concepts holistically, this study has enhanced our knowledge of what informs actors' choices and the reasons for differences in the practices they embrace. In other words, it enabled us to better account for differences between policies as they were developed and the way they were actually practiced upon implementation. This minimises the risk of substituting our own assumptions and interpretations of actors' interests for those that actually motivate actors' choices and practices.

Elaborating on the concept of policy translation provides clarity on how and why actors translate policy differently. Consistent with the translation literature (Mukhtarov 2014, Whittle et al. 2010, Lendvai and Stubbs 2007, Freeman 2007, Clarke 2008), I found that the multiplicity of actors, with their different ideologies, discourses, symbols and identities, is key in determining the extent to which actors resist or embrace new policy ideas.

In translation, the emphasis is on actor agency, which illuminates or makes explicit the distinctions between policies and practices (Freeman 2009). Notwithstanding the importance of actor agency in the translation process, the role of the motivations and logic behind actors' choices and actions is not always apparent. In other words, the concept of translation does not provide clarity on why one kind of practice is invoked in one circumstance and a different kind of practice in another circumstance, despite similar environmental conditions.

The concepts of bricolage and institutional entrepreneurship direct our focus to actors and the motivations behind their choices and practices. Indeed, the current study found that actors' capacity to display agency was not automatic but reliant on the presence of institutional entrepreneurs with command over resources with which to resist, renegotiate and enable institutional change (Beckert 1999, 2003; Kingdon 2002; Schneider and Teske 1992; Sheingate 2003; Helmsing 2016).

8.3.1 Towards explaining processes of institutional change: The role of actor agency

The present study provides additional evidence concerning the role of existing institutions in constraining actors' choices and preferences, hence making change evolutionary and incremental (Martin and Sunley 2006; Pierson 2000; Thelen 1999; Hall and Taylor 1996; Campbell 2004, 1997). Although evolutionists rely on the constraining aspects of institutions to explain change, they fail to establish how actors define their problems and interests and develop ideas about alternatives to institutional arrangements (Campbell 1997, 2004). In short, their accounts of institutional change neglect to account for actor agency, though this is a key factor in processes of institutional change (Campbell 2004, 1997).

In this study, I relied on the concepts of bricolage and institutional entrepreneurship to account for actor agency. Accounting for actor agency explained the gradual and continuous nature of institutions, with less focus on constraints.

The concept of bricolage applied in my framework is indicative of why the outcome of institutional change is often gradual and continuous. Bricolage reveals change to be path dependent and evolutionary because actors are not only constrained by existing institutions, but also existing institutions provide the means that enable actors to achieve their ends (though this does not always apply to some actors, like traditional actors). In other words, existing institutions enable actors to resist or direct them towards a new path of institutional change. Change is path dependent because actors can only make use of resources and institutions within their reach and control, hence, directing change to look similar to past institutions. Institutional change is gradual and continuous because actors combine elements within their repertoire in creative bricolage to form new institutional arrangements which differ but have some resemblance to the old ones (see Douglas 1986: 66-68, Levi-Strauss 1966: 16-33, Veblen 1964: 50-51, Campbell 2004).

The concept of bricolage highlights the importance of actor agency in processes of institutional change. Bricolage explains the enabling and constraining role of institutions. It hereby goes beyond the explanation that institutions change in a path-dependent manner which most evolutionists rely on to explain institutional change. Two of the best known illustrations

of the use of bricolage to explain the enabling and constraining nature of institutions were provided by Cleaver (2001) and Campbell (2005).

Cleaver (2001) identified three ways by which institutional bricolage takes shape: (i) aggregation, defined as recombination of existing institutions or socio-cultural institutions with newly introduced institutions; (ii) alteration, defined as improvising ad hoc new institutional arrangements by borrowing from both institutions to fit into a specific context; and (iii) articulation, defined as asserting identities and cultural values to resist imposed institutional design (Cleaver 2012, 2001, 2002; Cleaver, Dalton and De Koning 2015).

Campbell (2004) distinguished two types of bricolage: substantive and symbolic. Substantive bricolage "involves the re-combination of already existing institutional principles and practices to address [challenges] and follows the logic of instrumentality". Symbolic bricolage involves the recombination of symbolic principles and practices consistent with the dominant normative and cognitive principles existing within the social environment. This follows the logic of appropriateness, by which the recombined elements must be acceptable and legitimate (Campbell 2004: 67-70).

8.3.2 Bricolage and institutional entrepreneurship: Explaining actor agency

The definitions of bricolage by these scholars, however, do not provide a clear understanding of when an actor's innovation can be referred to as bricolage and when an activity should be viewed as a means for implementers to resolve implementation challenges (institutional entrepreneurship). Campbell (2004) came close in differentiating between substantive and symbolic bricolage, as this distinction closely relates to the logic that informs actors' choices and preferences. According to Campbell (2004), substantive bricolage aims to resolve institutional challenges, while symbolic bricolage is concerned with the normative and cognitive principles dominant within the social environment. Campbell's (2004) usage of bricolage, however, is applicable to higher level national actors in processes of policy formulation and implementation. He distinguished between bricolage and translation as follows: "Bricolage is recombination of old locally given ones [elements], translation on the other hand involves combination of new externally given elements received through diffusion as well

as old locally given ones inherited from the past" (Campbell 2004: 80). This distinction limits bricolage to only innovations or modifications of existing old practices. Translation then considers the possibility of actors looking in from outside an environment to innovate.

Campbell's (2004) description of symbolic and substantive bricolage does not clarify how actors set bricolage processes in motion. In other words, the outcome of a bricolage process is unclear, though Campbell (2004) identified the processes that qualify an activity as bricolage. It is important to note, however, that Campbell (2004) acknowledged this gap and called for longitudinal studies to enable the outcome of bricolage processes to be better understood. This notwithstanding, he maintained that in the absence of longitudinal studies bricolage can be discerned in action by observing the everyday practices of change agents.

Cleaver's (2001) usage of bricolage focuses on innovations at the local level, when an existing local social context encounters external policies. Cleaver (2001) identified key characteristics of the bricolage process as follows: (i) responses to everyday challenges, (ii) choices of actors are multipurpose and dynamic and (iii) solutions to challenges are familiar and legitimate and also aligned with the worldviews and moral values of the change agent. However, the translation processes that account for the actions and practices of actors remain unclear in Cleaver's (2001) conceptualisation of bricolage.

Cleaver's (2001) conceptualisation pays closer attention to the processes of bricolage than Campbell's (2004) use of the terminology, which is more descriptive and emphasises the logic that informs an actor's choices. Cleaver's (2012, 2002) description of the processes provides a much better understanding of the outcome of institutional change processes. Cleaver (2012, 2002) used the terms articulation, alteration and aggregation to describe the way actors make their choices by combining different institutional elements from their repertoire and the outcome of these choices.

As the policy implementation literature amply demonstrates, challenges in implementing policies is not new. In this regard, some scholars have pointed to the actions of street-level bureaucrats who change polices to suit local conditions. In that regard, Cleaver's (2012, 2002) usage of alteration and aggregation and Campbell's (2004, 1997) substantive bricolage are little different from earlier arguments raised on the activities of street-

level actors or bureaucrats (Lipsky and Bureaucracy 1980; Lipsky 1971, 2010).

Thus, while the bricolage concept can enhance our understanding of issues related to structure and agency, it does not offer a conceptual breakthrough or theoretical innovation; nor does it settle fundamental questions about structure and agency (Bakir and Jarvis 2018). Bricolage, rather, restates the definition of policy and institutional entrepreneurs familiar from the institutional entrepreneurship literature.

The forgoing leads this study to restrict bricolage only to actors' capacity to invoke community-embedded institutions to resist or promote institutional change. The focus on that capacity enabled us to posit explanations of why actors did what they did and why practices differed despite similar local social institutional contexts.

8.3.3 Institutional entrepreneurship in explaining actor agency

The concept of institutional entrepreneurship bridges the gap between institutions and actors by focusing on how actors activate their agency, which contributes to our understanding of processes of institutional change (Hardy and Maguire 2008). In this study, I used the institutional entrepreneurship concept to provide explicit accounts of actors' motivations and the resources they employed to modify or change institutional arrangements. Although actors had the capacity to frustrate or promote institutional change, their choices were not automatic. Existing institutions and actors' command over resources determined what practices were deemed normatively acceptable and cognitively possible. The choices that actors ultimately made and the practices they embraced, as shown in this study, had to "fit in" socially with the norms and worldviews of the change agents and other interest groups.

This focus on actors' motivations and strategies and the resources actors employed provides a clear understanding of when actors' activities qualify as bricolage and when activities are employed towards the resolution of implementation challenges. In addition, it provides insight into why actors adopted different practices despite similar environmental conditions.

8.3.4 Understanding processes of institutional change: An approach to comparative institutional analysis

In line with Maseland (2011), this study argued that the challenges in understanding processes of institutional change are not about theories or empirical evidence. Rather, they are methodological in nature. Meaningful comparisons require factors held in common across all cases. Comparisons overlooking differing conditions or contextual factors may reduce the internal and external validity of any findings generated.

The findings from the current research indicate that certain common factors were at work which made change gradual. Among these factors are the social context, institutional capacity, knowledge and access to programme information, the nature and physical characteristics of water resources, and the support and commitment of leaders.

The strength of this study lies in the methodological approach adopted in selection of the cases. "Most different" and "most similar" cases were used as the basis for determining what factors were common to all, thus enabling us to understand what processes account for actor agency.

First, the analytical framework for this study, which employs an interdisciplinary lens to bring causal relationships into focus, allowed us to move beyond the theoretical and empirical evidence. The findings from this study demonstrate diversity in implementation, despite both similarities and differences in institutional context. Herewith, the study provides additional evidence regarding the roles actors play in processes of institutional change.

Secondly, we were able to link a number of factors to actors' choices and practices. The findings from this study point to a configuration or combination of factors that may explain why changes are persistent and representative of a process of bricolage (Cleaver 2012, 2002; Campbell 2004, 1997), while in other circumstances, actors modified innovations to "fit their unique needs in time and space" (Whittle et al. 2010: 19).

The current study's employment of the concepts of translation, bricolage and institutional entrepreneurship contributes to existing knowledge on the role of institutions and resources in constraining and enabling actor agency. This reasserts the primacy of context and actor agency for understanding and analysing institutional and policy change. Although institutions constrain actors' ability to translate institutional changes, they also provide the means by which actors can exercise their agency. This study's

unique contribution is that it traces further evidence to establish what factors motivate actors to do things differently. The motivations and logic behind actors' actions legitimise institutional change and also enhance the durability and acceptance of the new practices introduced by change agents.

This study suggests that actors' responses to pressure for institutional change do not depend only on existing local social and environmental resources available to institutional entrepreneurs. Actors' motivations, logic and expectations play an important role in the selection process. Indeed, motivations, logic and expectations can promote or frustrate processes to enforce institutional change. This research additionally suggests that the presence of bricoleurs and institutional entrepreneurs and their command over resources play an important role in the choices that actors ultimately make and the strategies they employ. Drawing on the NCWSP, I showed why the institutional changes anticipated in the small town water sector in Ghana have been slow and path dependent. Little has been achieved in terms of stimulating collective ownership and responsibility for operations and maintenance or in accumulating resources for future upgrades and system expansions.

Notwithstanding the above, it must be remarked that this study focused on water resources, and thus was limited in its representation of the nature of the water sector. The water sector is recognised as having particular characteristics in terms of institutional change, related to water rights, physical locations and territorial boundaries, to name just a few. As a result, generalisation of the current findings to other economic or public goods may be misleading.

The primary contribution of this study is methodological. The employed method shed light on why the behaviour of actors may differ despite similar contextual settings, and why behaviour may be similar despite differences in context. This study revealed institutional change to be a messy and complex process. Study of such a process requires an interdisciplinary approach, drawing on the strengths of a variety of concepts and theories. Only with such a broad approach can we understand and appreciate the factors held in common which direct the path of actors' choices and practices.

This study found the following interrelated factors to be key in driving institutional change: social context, institutional capacity, knowledge and access to programme information, the nature and physical characteristics

of the resources, the presence of external actors or networks, and the support and commitment of leaders. Despite the importance of these factors in driving change, the political, economic, moral and social interests of change agents were also important in determining actors' choices and practices. In addition, the existence of institutional entrepreneurs or bricoleurs with command over resources determined the path and direction of change. The outcome of the institutional reform process was not the focus of the change agents. Rather, change agents made choices and embraced practices that were cognitively aligned with their interests, worldviews and values and were normatively acceptable.

8.4 Strengths and weaknesses of the research

The current study was not specifically designed to evaluate the outcome of institutional change processes. However, the survey conducted for this research found that the quality of water services was deteriorating in the case study communities (see appendix 14). Furthermore, activities to ensure the continued functionality of the water systems were not being enforced in most of the cases (see appendix 15). Demand for piped water has remained low in communities with alternative water sources, while water scarce communities have been unable to expand their water system to accommodate increased population and community expansion. Another important finding concerns the worrying financial position of the water systems, due to both a rising unit cost of production, as a result of low demand, and overstretched water facilities. However, this study could not establish the consequences of the actions of change agents towards collective participation and ownership of the water system.

This study did find that implementation has been slow and path dependent. The ideas of community management and community participation centre on empowerment of users to participate in water activities and hold water actors accountable. Although the current study is based on small sample, the findings suggest that water activities have been left to a few actors, while assurances of water service quality and continuous functionality continue to diminish. The findings indicate that current activities are little different from the challenges encountered before, which prompted the institutional reforms.

Nonetheless, the findings from this study are subject to some limitations. First, this study draws on only six cases, which might prevent a fair

assessment of actors' choices and preferences. In addition, actors' responses to change did not always effectively bring about institutional or technological change. This study illustrates that understanding the processes involved in finding solutions to water-related challenges cannot be achieved in a linear and straightforward fashion, but rather, involves longitudinal research. Moreover, although the framework of the current study sets out to explain institutional change processes, it may not be exhaustive. A way forward in this regard would be to undertake detailed anthropological or longitudinal research. These paths could deepen understanding of actor agency beyond the current findings. That is, future research could look into an actor's habit of thought to better understand constitutive factors that may be invisible and taken for granted but nonetheless form a core part of actors' interpretations of events, informing their choices.

Secondly, the nature and characteristics of the water sector make it difficult to apply a common study framework, such as the integrated water framework (Ostrom 2005), a collective action framework or an integrated development framework. The choices made among the different concepts used in our framework limited this study's ability to engage in a detailed theoretical exercise. However, this study provides empirical contributions in relation to understanding the role of institutions in enabling actor agency despite existing environmental challenges. Discerning factors held in common in reference to actors' motivations and the logic behind their actions enabled us to understand that actors' reasons for engaging in institutional change are complex and hard to discern. Change is motivated by economic, political and social considerations. Actors' motivations and logic coupled with the underlying institutional context and conditions determined how actor interpreted phenomena, the choices they made and the practices they embraced.

Thirdly, this study examined implementation at the local level with lesser focus on the influence of state and local government actors on the process of institutional change. Taking a more holistic approach, including these actors, could deepen our understanding of how change agents exercise power in modifying or renegotiating given institutional arrangements. Change must be understood from both the state perspective (policy) and the community perspective (practice). Only if processes are analysed holistically can the internal and external validity of our case findings be confirmed. My efforts to get state actors' views were constrained by government actors' lack of availability during my fieldwork. In addition, frequent

staff transfers in state organisations is a major issue that further complicates roles. In some cases, particularly cases 4 and 5, it proved challenging to even pinpoint the staff responsible for water activities. In the rest of the cases, some information was made available, which I used in my analysis to gain an overall picture of state actors' roles in the process of change. In addition, my role as a senior development planning officer at the Ga South Municipal Assembly in Ghana enabled me to act as both an insider and an outsider to assess the implementation of institutional change. Furthermore, state and local government actors have already received more attention than local level implementers in studies of public policies, decentralisation and public service provision.

In view of the above, care should be taken in generalising the findings to other social, political and economic domains and academic disciplines. Bearing in mind this study's limitations, water institutions, like any institution, were found to be subjective, path dependent, hierarchical and nested both structurally and spatially, and embedded within a social, cultural and political context, while also involving multiple actors. The choices made in case selection for the current research provided a strong methodological framework with which a number of combinational factors could be mapped to explain processes of institutional change. These factors demonstrate a logic of economic rationality, but are also informed by community-embedded institutions, which are often taken for granted.

The research framework relies on several concepts (translation, bricolage and institutional entrepreneurship) to identify common factors accounting for differences between policy and practice. Combining insights from several disciplines provided additional evidence to show that institutions create stable expectations and practices which constrain actors' choices. However, the stability of institutions hinges on actors' motivations and expectations, which inform the choices that actors make and the practices they employ; and it is these that determine the path that an institutional change process takes.

8.5 Further research: Understanding actors' motivations and logic

A number of conceptual issues have been raised as key in matching actors' actions with their own best interests or the collective good. As shown by many studies, including this one, understanding the role of actors and their

agency facilitates our view of processes of institutional change. More research is therefore required to determine the efficacy of the motivations and logic behind actors' choices and practices, especially in translating and implementing institutional change.

Community-embedded institutions are part of the repertoire of institutions; they constrain actor agency while at the same time enabling institutional entrepreneurs to exhibit agency. Community-embedded institutions are socially constructed based on individual and group interpretations of a particular setting. Hence, they are a key determinant of actors' behaviour. This brings us to the notion of "habit" as a key determinant in institution formation. Institutions emerge from habits of thought and actions in the social domain, which are the outcomes of habits of life. According to Veblen, (1899) institutional change should be understood as a product of human nature. Habits, according to him, are durable mechanisms that sustain institutions and enable individuals to make decisions and act in particular ways (Chavance 2009).

Revisiting the notion of "habit" is therefore essential to deepen our understanding of the motivations and logic behind actor agency. Scholars such as the old institutional economists (e.g., Thorstein Veblen, John Commons and Wesely Mitchell) and the pragmatist philosophers (e.g., William James and John Dewey) provide a number of studies on habit. According to these, institutions work only because the rules involved are embedded in shared habits of thought and behaviour. People choose to follow rules repeatedly because the rules are embedded and emerge from social structures rooted in commonly held habits or thoughts. Based on this notion, institutions can be understood as conditioned by and dependent on individuals and their habits but not reducible to them (Hodgson 2003).

The capacity of institutions to mould our preferences and purposes, and to change individuals' aspirations, stems from the concept of habits (habits help determine our preferences and dispositions). When new habits are acquired or existing habits change, our preferences alter. Understanding actors' habits of thought also allows us to identify the reasons behind their choices and practices. This in turn provides a more informed understanding of actor agency and limits errors of attributing wrong causalities to actors' choices and practices in a given context.

In this analysis, we observed that processes of change were not linear but messy, involving different actors with varying power and relationships.

The efficiency of actors' choices and practices in steering the outcomes of implementation has, however, received limited attention. We need further evidence to evaluate the relevance of institutional reforms and understand what works at the ground level. It is only by engaging in more comparative institutional analysis that we will we be able to identify structured combinations of factors that allow us to discern actors' motivations and the choices they make in directing paths of institutional change.

Appendices

Appendix 1
Composition and procedure for formation of water and sanitation management team

1. A Management Team shall consist of not less than ten and not more than fifteen elected members, at least one-third of whom are women and at least one-third of whom are representatives of the Assembly or Unit Committees.

2. Subject to paragraph 1, the assembly shall determine the total number of members of each Management Team based on the number of constituencies that exist in the area covered by the Management Team.

3. The members of the Management Team shall be elected from representative constituencies.

4. A constituency shall determine its own electoral procedure.

5. The electoral procedure shall be facilitated by the District Water and Sanitation Management Team.

6. For the purpose of election, a representative constituency shall include:

(a) water and sanitation committees established in designated neighbourhoods of the area or community;

(b) the elected Assembly members of the community;

(c) the Unit Committee members of the community;

(d) water user groups;

(f) a representative of the traditional authority, except that the chief of the community is not eligible for election to the Management Team.

For the purpose of this schedule,

"a water and sanitation committee" means a management team for a community which has a borehole with a hand pump as a water supply facility;

"connection fee" means a fee paid upfront for directly piped connection of water to a house, institution or other property excluding the cost of material and labour; and

"constituency" means a section of a community or identifiable group of people that have a common interest in the water facility (CWSA LI 2007).

Appendix 2
Water supply project cycle (NCWSP)

***Project promotion**:* under this phase state actors are to sensitise and create awareness of the project within proposed beneficiary communities. This stage ensures that community members have knowledge of the overall reforms and expected activities to be undertaken by the community to enable participation in the project.

Community development stage

Application stage: This is followed by community members initiating the desire to have a water system. The community initiates the process through holding a community meeting facilitated by opinion leaders in the community. The community unanimously accepts the offer by formally applying for a water facility. The discussions at this stage are to ensure that (a) all sections of the community are part of the decision-making processes; (b) deliberations are undertaken on fundraising strategy to pay the counterpart funding; and (c) choices are made among the technological options applicable to the community.

Community selection: After the application stage the participating communities are selected to benefit from the water project based on the following criteria:

- level of poverty in the community
- existing water facilities and conditions in relation to distance and proximity
- water coverage
- incidence of water-related diseases
- performance of existing community-based organisations
- number of self-help project completed in the last five years
- evidence of bank statement showing initial deposit of counterpart funding

Construction, supervision and community development stage: Both the construction of the facility and community development and mobilisation are carried out simultaneously. Activities outlined at this stage include the following:

- community sensitisation of the project
- formation and training of water and sanitation committees (WATSAN) and water and sanitation management team (WSMT)

- mobilising community to raise funds towards the operations and management of the facility
- support for the community to undertake participatory planning to determine the position of standpipes, identification of sources of water, selection of management options for the operations and management of the system

Post-construction stage: Activities under this stage include:

- monitoring and coordination of the activities of water and sanitation management team and operating staff by the DAs
- ensuring that the community, water and sanitation management teams and operating staff have all the relevant information and training with regard the operations and maintenance of the water system
- reviewing management reports from water and sanitation management teams and taking appropriate and corrective actions
- providing information and linkages to relevant stakeholders to assist in ensuring sustainability of the system
- approving tariffs
- conducting technical, physical, social and financial auditing of the water system
- ensuring that beneficiary communities have in place and have adopted a by laws

Post Project: The CWSA shall provide relevant post-project support (up to one year) to beneficiary communities to promote achievement of system sustainability

Appendix 3
General Principles

Small Town Water Supply Systems shall be operated and maintained in Sustainable manner by meeting the following requirements:

a. Delivering to consumers the design quantity of water.

b. Producing water to Ghana Standards Board Water Quality Standards.

c. Delivery of water in a cost-effective manner (in accordance with tariff guidelines).

d. Delivering water in a virtually uninterrupted manner (at least 95% of the time).

e. Planned routine and periodic maintenance are carried out for all electromechanical equipment and civil works structures.

2. Water Supply Systems shall be operated and maintained either directly by the community or through contractual arrangements with private companies.

3. All operational staff of private companies or community members engaged to operate and maintain the systems shall be provided with adequate training and shall be certified to perform their respective duties. Periodic refresher training shall be provided to such staff.

4. Adequate records shall be kept in the operation and maintenance of the water supply system for analysis, reporting and informed decision-making (Operations and maintenance guidelines 2010)

Appendix 4
Basic requirements for community water facility

A person who designs a water facility for a community shall ensure that:

(a) an individual in a served community has access to not less than twenty litres of water per day

(b) the water facility or delivery point in the case of a piped scheme is located at a place which is within a walking distance of not more than five hundred meters from the farthest house in the community or a section of the community

(c) the water facility provides safe water to the community throughout the year

(d) the water facility design conforms to the design guidelines issued by the agency (Community water and sanitation Agency Regulation, 2011:5)

Appendix 5
LI 2007

A person who operates a piped water supply system shall ensure that the piped water supply system is maintained in a sustainable manner by

(a) delivering the specified quantity of water to customers over the designed life of the piped water supply system

(b) producing water in accordance with the water quality standard in these regulations

(c) delivering water in a cost effective manner

(d) delivering water in a virtually uninterrupted manner, at least ninety-five percent of the time

(e) ensuring that routine and periodic maintenance is carried out for electro mechanical equipment and civil works structures, with minimum interruption of supply

(f) ensuring that the management team is in accordance with the respective DA's by laws

(g) ensuring that the source of water supply is protected from the risk of contamination

(h) ensuring that operational hazards are avoided.

Appendix 6
Roles and responsibilities of local water actors

Type of actor	Responsibility	Minimum qualification
System manager	Responsible for the overall management of staff	Higher national diploma from technical programme
Operator	Carry out technical and routine maintenance and pumping water for distribution	National vocational training institute in electrical or mechanical field (NVTI)
Administrator /Financial clerk	In charge of all administrative activities	Ghana commercial examination stage II or RSA II
Accountant	Review available financial records and prepare monthly financial reports	Higher national diploma in accounting (HND)
Plumber	In charge of minor plumbing works	
Revenue collector	Collect revenue from vendors and private users	Senior secondary school certificate examination (SSCE)

Vendor	Collect money at the standpipes and opening and closing the tap within the timeframe provided	No qualification needed
Water and sanitation management team (WSMT) and water and sanitation committee (WATSAN)	Prepare and execute plans for provision of improved water supply facilities Mobilise funds to pay for part of capital cost of the water project and to cover operations and maintenance works Set water tariffs Engage accredited laboratories to undertake periodic water quality tests in accordance with the Ghana Standards Board Standard/Water Safety Framework Set application procedures, connection and reconnection fees for service Ensure sustainability of water facilities Collect technical data on management of the water supply system Prepare financial records for operations and maintenance and provide records to the metropolitan, municipal or district assembly and CWSA for inspection Audit financial records internally Present reports on management of water supply system twice yearly to the entire community (town) Monitor and coordinate activities of water personnel	No qualification needed

Appendix 7
Components of water tariff (Regulations 4 and 5)

1. Water production cost
2. Distribution cost
3. Routine maintenance and other contracts
4. Repair work by staff and private maintenance contracts
5. Water quality monitoring at plant level
6. Tariff collection cost (vendors) (not more than 20% of the total tariff)
7. Replacement cost (20% of the total sum of items 1 to 6)
8. Rehabilitation and expansion (5% of the total sum of items 1 to 6)

9. Sanitation fund (8% of the total sum of items 1 to 6)
10. Contingency (2% of the total sum of items 1 to 6)

Appendix 8
Tariff setting for individual and institutional customers
(Regulation 19 (1))

Item	Description	Unit rate Gh₵ per cubic meter	Actual amount of tariff Gh₵	Method of tariffs collection
1	Individual	Standpipe tariff per cubic metre	The volume of water consumed in cubic metres times the unit rate	The pay-as-you-fetch method at standpipes or pumps
2	Non-commercial customer	1.2 to 1.3 times the standpipe tariff per cubic metre	The volume of water consumed in cubic metres times the unit rate	Monthly billing for individuals
3	Commercial customer	1.4 to 1.5 times the standpipe tariff per cubic metre	Volume of water consumed in cubic metres times the unit rate	Monthly billing for individuals and organisations

Appendix 9
Actors and their roles and responsibilities

Actors	Roles and Responsibilities
Development partners	Provide financial, technical and logistical support for the implementation of the NCSWP Participate in policy dialogues and lesson sharing, monitoring and evaluation
Ministry of Local Government and Rural Development	Formulate policies for governance and develop sector plans Provide management advisory services to the metropolitan, municipal and district assemblies
Ministry of Water Resources, Works, and Housing (MWRWH)	Formulate strategies, mobilising resources, sector coordination, planning, evaluation and monitoring
Water Directorate (established within the MWRWH)	Coordinate the activities of Community Water and Sanitation Agency (CWSA), Ghana Water Company Limited (GWCL) and Water Resources Commission (WRC)
Community Water and Sanitation Agency (Head Office)	Recommend policy changes to the Ministry of Water Resources, Works and Housing and set strategies, procedures, guidelines and standards for water supply and sanitation interventions Assist metropolitan, municipal and district assemblies to source funds both nationally and internationally. Provide backup support to CWSA regional offices for monitoring and evaluation

Regional Community Water and Sanitation Agency	Disseminate sector policies and guidelines to all stakeholders Provide professional backup services to metropolitan, municipal and district assembly staff in all areas especially in the preparation and review of District Water and Sanitation Plans (DWSPs) Monitor progress of the project cycle Enhance sector capacity building through provision of training opportunities to stakeholders at local, regional and national level Monitor the effectiveness of national policies and CWSA guidelines and standards and recommend review where necessary Facilitate water safety monitoring in accordance with the Water Safety Framework and ensure the required actions are implemented (Sector guidelines – general, Rural Communities & Small Towns, 2014:5)
Metropolitan, municipal and district assemblies/ works departments	Prepare District Water and Sanitation Plans in line with medium-term goals of the assembly Monitor operate and maintain systems in terms of financial, technical and administrative performance Monitor the water safety of all water systems in the district in accordance with the Water Safety Framework Audit WSDB and WATSAN accounts Review and approve community tariffs in accordance with operations and maintenance guidelines Approve by laws for the operation of WSDBs and WATSANs Provide technical approval for WSDB plans (extensions etc.) Disseminate information on water supply, sanitation, and hygiene promotion Support district works departments to provide technical support to WSDBs and WATSANs Manage and monitor contracts at the district level (Sector guidelines – general, Rural Communities & Small Towns, 2014:6)
Water and sanitation management team (WSMT) and water and sanitation committee (WATSAN)	Prepare and execute plans for provision of improved water supply facilities Mobilise funds to pay for operations and maintenance costs Set water tariffs Engage accredited laboratories to undertake periodic water quality tests in accordance with the Ghana Standards Board Standard/Water Safety Framework Set application procedures, connection and reconnection fees for service connections Ensure sustainability of water facilities Collect technical data on management of the water supply system Prepare financial records for operations and maintenance and provide records to metropolitan, municipal and district assemblies and CWSA for inspection Audit financial records internally Present reports on management of water supply system twice yearly to the entire community (town)
Water personnel	Carry out the overall management of the water systems Carry out technical and routine maintenance Review financial records and prepare monthly financial report Collect revenue

	Collect money at standpipes Manage all administrative activities
Technical assistance / partner organisation	Draw up feasibility studies and designs Evaluate bids and supervise construction, hydrogeological services, training, community mobilisation and hygiene and sanitation promotion
Contractors/suppliers and distributors	Carry out construction (drilling and civil works) Supply and install equipment, spare parts
Area mechanics and private firms	Provide repair and maintenance services
Community	Express demand for services, including technology preferences and level of services Pay for services provided Register complaints when services do not meet minimum standards Demand accountability from service providers Monitor operations and maintenance activities of service providers (District Operational Manual, 2014).
Private water operators	Operate and maintain water supply infrastructures, including electrical/mechanical equipment, hand pumps, etc. Manage and operate water supply schemes

Appendix 10
Operational management guidelines

There shall be four main options for management operations and maintenance of water supply systems.

Option 1: The community, through its water and sanitation management teams and employees, operates and maintains the Water Supply System entirely by itself (non-mechanised systems e.g. gravity water schemes). A trained Manager, Operator, and Financial/Administrative staff shall be employed by the community to carry out daily operation and maintenance activities. They shall be supported by skilled artisans, e.g. plumbers and masons, from within the community whose services may be procured when necessary on a retainer basis.

Option 2: The community, through its water and sanitation management teams engages staff for the daily operation (financial, administrative, technical) and maintenance and calls a certified/reputable firm to carry out specialized technical, financial or administrative functions as and when needed. Such functions may include the preparation of financial reports, internal auditing or some aspects of planned maintenance.

Option 3: The community, through its water and sanitation management teams engages staff for the daily operation (financial, administrative, technical) and maintenance and signs a contract with a firm or firms to perform other specialized technical, financial or administrative functions on a periodic basis. Such functions may include the preparation of financial reports, internal auditing or routine/preventive maintenance.

Option 4: The community, through its water and sanitation management teams contracts a firm to completely operate and maintain the Water Supply System including meter reading, billing and revenue collection, etc., for an agreed fee. This arrangement enables the water and sanitation management teams to set performance standards for a set period of time.

Other management options may be adopted where necessary. Each water and sanitation management teams, in consultation with the community CWSA and DA'S must decide on the management option to be adopted. The choice of the option depends on the following;

- The complexity of the Water Supply System;
- The quantity of water being produced/Number of people served;
- The availability of private firms to provide the relevant services required;
- The socio-economic status and heterogeneity status of the community, and
- The interest and commitment of the community towards operational management of
- the system, etc.

Generally, the following guidelines shall apply:

1. Communities with up to 5,000 people served with non-mechanised systems (e.g. gravity water schemes) may adopt Option 1, provided they are interested and committed to the operational management of the Water Supply Systems themselves.

2. Communities of 5,001 – 10,000 people served with simple boreholes, gravity or slow sand filtration based piped systems may adopt Option 2 or preferably Option 3 to ensure the sustainability of mechanized systems and reduce the repair cost.

3. Communities with populations of above 10,000, and/or communities served with complex Water Supply Systems shall adopt Option 4 (Small Town Sector and maintenance Guidelines 2010:2-4).

Appendix 11
Population and water resources of cases

Case	Population	PSP	PC	HDW	BH	DAM	STREAM	MBH	IC
1a	2,012	5	27	13	2(NF)	0	1	0	
1b	1,649	3	12	1	2	0	1	0	
2	2,491	6	21	12	3(NF)	0	1	0	
3	13,800	26	450	8	3	0	10	0	3
4	10,137	16	125	50	2	0	0	0	1
5	11,173	20	33	0	10	2	0	1	2
6	15,581	47	42	0	4	3	0	3	6

PSP = Public standpipe, PC = Private connection, HDW =Hand-dug well, BH=Bore hole
MBH= Mechanised bore hole, IC= Institutional connection
NF =Not functioning

Appendix 12
Water and sanitation team educational qualifications and training received

Case	Name	Position	Educational Qualification	Training received
Case 1	J.K Owusu	Chairman	MSLC	Yes
	James B. K Juser	Secretary	MSLC	Yes
	Mary Tawiah	Treasurer	MSLC	Yes
	Mohammed Sagoe	Vice Chairman	O level	Yes
	Kwame Odartey	Vice Secretary	O level	Yes
	Nana Abaidoo	Technical-Coordinator	MSLC	Yes
	Grace Nyarkoh	Women user Organiser	MSLC	Yes
	Margaret Amaoh	Hygiene and Sanitation and women Organiser	MSLC	Yes
	John Ampoong	Chief Representative	MSLC	Yes
	Amoo Nyarko	Assembly member	MSLC	Yes
	Kofi Heinsen	Assembly Member	MSLC	Yes
Case 2	Benoni Cole	Chairman	MSLC	No
	Bismark Intsiful	Secretary	MSLC	No
	Esther Manso	Treasure	Nil	No
Case 3	Emmanuel G. Apaw	Chairman	Diploma in Education	No
	Simon Antwi	Treasurer	Information Technology	No

	Atta Bright	Secretary	Degree Finance	No
	Kofi O. Agyemang	Member	Banking	No
	Benjamin Agyemang	Member	Degree (Education)	No
	Ebenezer Bempah	Member	Degree	No
	Abraham Yeboah	Member	Diploma Education	No
	Samuel Kyeremateng	Member	Electrician	No
	Sefah Kwame Asiedu	Member	MSLC	No
	Hannah Apau	Member	MSLC	No
	Boah George	Member	MSLC	No
	Eric Brobbey	Member	MSLC	No
	Dora Ahenkora	Member	MSLC	No
	Nana Kofi Adu II	Member	MSLC	No
	Kwabena Sarpong		O level	No
Case 4	Frimpong Manso	Chairman	Diploma	No
	Danso Stephen	Technical	Degree	No
	Agyemang Isaac	Secretary	Degree	No
	Appiah Kasagyen	Member	Diploma in Theology	No
	Kasmas Kyezia	Member	Degree	No
	Ahenkra Matison	Member	Diploma	No
	Afareb	System manager/manager	Diploma	No
	Agyekum Rebecca	Member	MSLC	No
	Metaa Baba	Member	Nil	No
	Nana Kwame Afrifa	Member	MSLC	No
Case 5	Henry Kumah	Chairman	Agric Extension Officer	Yes
	N.K Godwin	Secretary	Diploma in Education	Yes
	Alhaji Issah	Vice Chairman	Nil	No
	Bekirite Hanna	Vice Secretary	SSCE	No
	Badakbu Npong	Financial Secretary	Nil	No
	Koyatibe Moses	Treasurer	Nil	No
	Akua Gmakanyi	Member	Nil	No
	Alhaji Inusah	Member	Nil	No
	Godfrey Napari	Member	Diploma in Education	
Case 6	Ibrahim Yakubu	Chairman	O level	Yes
	Yakubu Azara	Vice Chairman	Nil	Yes
	Adam Bawa	Secretary	Nil	Yes
	Abukari Marima	Treasurer	Nil	Yes
	Alhassan Ramatu	Organiser	do	No
	Alhasan Dukuruga	Vice Organiser	do	No
	Adam Gado	Chief rep	do	No
	Mahama Azara	Member	do	No

	Ibrahim Abdulai	do	do	No
	Abukari Abiba	do	do	No
	Zilim Alhassan	do	do	No
	Abukari Adam	do	do	No
	Yusif A. Rahaman	Assembly member rep	SSCE	No

Appendix 13
Water personal and qualifications

	System manager Qualification	**Operator/Plumber qualification**	**Administrator /Accountant (Qualification)**	**Revenue Collector (qualification)**	**Security Officers**	**Total # of Vendor**
Case 1	Position filled (1) City and guilds Electrical	Plumbing	General Certificate in Education 'Ordinary Level' ('O' level)	Position vacant		6
Case 2	Position Vacant (finance officer acting in that capacity)	Middle Level School certificate (MLSC)	Ghana Commercial Examination Certificate /RSA III	Position vacant		6
Case 3	Position Vacant (finance officer acting in that capacity)	Position filled (2) Both staff have qualification in NVTI (mechanical)	Position filled (1) HND in accounting	Position filled (1) General Certificate in Education 'Ordinary Level'	Position filled (2)	26
Case 4		'O' level	'O' level	Senior Secondary School Certificate Examination (SSCE)		14
Case 5	London City and Guilds	Hand pump technician	HND in accounting	Junior High School		27 have been sacked
Case 6	Position vacant	SSCE	HND in accounting	SSCE (Two Collectors)		

Appendix 14

Results of survey on quality of water services (% of user respondents)

Cases	Distance to PSP (%)			Quantity of water received (20 litres a day) %			Reliability of water (%)			Quality of water (%)		
	Good	Indifferent	Poor	Good	Indifferent	Poor	Good	Indifferent	Poor	Good	Indifferent	Poor
1a	59	18	23	67	33		50	43	7	30	57	13
1b	75	25		80	15	5	55	45		60	40	
2	70	25	5	65	35		70	25	5	63	31	6
3	64	15	21	38	21	41	35	25	40	26	19	45
4	46	23	31	38	32	30	31	37	32	41	36	23
5	70	15	15	44	18	38	34	30	36	95	3	2
6	57	22	21	9	26	66	20	30	50	91	7	2

Appendix 15

Institutional arrangements to ensure continuous functionality of the water supply system

Cases	**1a**	**1b**	**2**	**3**	**4**	**5**	**6**
Routine maintenance conducted	Yes	Yes	No	No	No	Yes	Yes
Conduct water quality test	Yes	Yes	No	Yes	No	Yes	Yes
Operational staff provided with training and refresher courses	Yes	Yes	No	Yes	No	Yes	Yes
Annual accounts are audited regularly	Yes	Yes	No	Yes	No	No	No
*Each water system has the required financial account	Yes	Yes	No	Yes	No	No	No
Quarterly report sent to DA	Yes	Yes	Yes	No	No	No	No
Public durbar held once a year	Yes	Yes	No	Yes	No	No	No

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Curriculum Vitae

Salomey Kpodjie Gyamfi Afrifa

Salomey has fifteen (15) years of professional experience in Project Planning and Administration. She has acquired expertise in participatory project monitoring and evaluation and Participatory Learning and Action for Community Mobilization activities. Salomey has deep experience in conducting social research on development issues, formulation of development plans, designing project proposals, conducting training and organizing fund-raising events.

Salomey is an experienced trainer, facilitator and motivator. These have been demonstrated in her abilities to relate freely with communities, animating them and critically assessing their needs, formulating appropriate marketable proposals to address problems and issues identified. She has organized and facilitated several series of workshops and has acquired the skill of designing workshop training manuals and reports.

As an accomplished development planner, project coordinator and facilitator, she has in-depth knowledge and understanding of community mediation and conflict resolution, specializing in social and economic development issues. She has undertaken a series of monitoring and evaluation assignments with both local and international donor-funding agencies using participatory approaches.

Before her PhD, she was the coordinator for community water and sanitation projects, HIV and Aids, and Community Based Rural Development Projects in the Ga South Municipal Assembly. During her studies at the International Institute of Social Studies, she worked with the Project Office as the project coordinator (2017–19) for the Erasmus+ Project for three Balkan countries, Suriname and South Africa. She earned a Master's degree in Public Administration from the University of Ghana.