PARTICIPATORY WATER GOVERNANCE IN NIGERIA: TOWARDS THE DEVELOPMENT OF AN EFFECTIVE LEGAL FRAMEWORK FOR RURAL COMMUNITIES

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ABSTRACT

Nigeria’s legal framework for supporting the supply of potable water has not proven to be effective. This is primarily due to the non-participation of a broad spectrum of stakeholders, particularly rural community members. A contextualised policy re-orientation through the use of participatory governance may, however, support the development of a more sustainable potable water supply for rural communities. A novel participating water governance framework, designed to enable effective potable water management for rural communities, has been developed in this study. A conceptual framework drawing on a synthesis of the extant literature provides the basis for a qualitative empirical inquiry. Semi-structured interviews with participants who were selected by using a purposive strategy, helped to inform the development of the proposed framework. A key feature of the framework is the establishment of a rural advisory board, which may explore relevant principles and techniques relating to transparency, accountability and participation, customary norms and values, laws, regulations, policies and community task forces. The findings identify that rural community members have capacity to collaborate with state actors and donors in governing their own potable water, enhanced by proximal relationships. This may be inferred from an existing culture of participation in Nigeria, with its own enforcement of customary norms and values through ostracism, enabling compliance and enforcement to governance rules. The findings support a power shift from the centralised government institutional management to a governance of pluralistic process incorporating localised cultural norms. Thus, participatory democratisation may be reasonably institutionalised by using established decision-making processes, capable of empowering rural community members. These findings have been incorporated into a refined conceptual framework, validated by using the mixed methods approach. The study contributes to knowledge by the theoretical formulation and proposition that participation may support the effectiveness of potable water management, while contextualised water governance techniques may be specifically explored to support the legal framework for water supply. The use of Socio-Legal research methodology provides a further contribution to knowledge, through the exploration of the qualitative approach. The approach provides empirical understanding and interpretation of inquiry, based on several techniques via thematic content analysis. In its conclusion, the study makes recommendations to water resource stakeholders to adopt the practices of decentralization, integration and co-ordinated decision-making in participating water governance, which may include ostracism for compliance and enforcement of governing rules, under a rural advisory board.
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<td>CFRN</td>
<td>Constitution for the Federal Republic of Nigeria</td>
</tr>
<tr>
<td>CSR</td>
<td>Corporate Social Responsibility</td>
</tr>
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<td>CTF</td>
<td>Community Task Force</td>
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<td>Integrated Water Resources Management</td>
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DEDICATION

This study is dedicated to the memory of my late husband, Dr (Chief) Emmanuel Efewumuoho Aluta, who paved the way for this achievement and my late parents, Steve Jeffra Ewhe and Maria Alake who foresaw today.
CHAPTER 1: GENERAL INTRODUCTION

1.0 INTRODUCTION

This chapter is an overview presenting relevant issues progressively shaping the study. The research background consists of key matters influencing the research writing. These issues result in the problem statement, initiating the research question. The aim of the study will be actualised by stated objectives. The chapter discusses the research philosophy reflected by the study. This consists of social constructivism and interpretivism, while environmental ethics is the touchstone for stewardship and sustainable development. These are encapsulated in theoretical proposition, identified by literature review and critical thinking. The research methodology reflects the approach explored for inquiry. Organisation of the thesis is the summary of chapters and their titles, while the research scope and expected outcome detail the extent of the research and what it may portend.

1.1 BACKGROUND TO THE RESEARCH

Potable water supply attracts enormous global attention, due to its potentials for meaningful existence of mankind and the accruing challenges. One of the world’s greatest problems is water scarcity (Schulz, 2001), evidenced in the multitude of literature providing information that, there is plenty of water in the world but, only 3% of the total amount is freshwater (Horne and Goldman, 1994; Gash et al., 2001). This amount is affected by pressure of increase on water demands, causing a dis-proportionate decrease in freshwater and ground water resources (Acreman, 1998). Major causes may be traced to escalating population, urbanization, technological development (Falkenmark and Lindh, 1976; Engelman and Leroy, 1993; WHO, 2010a) and the phenomenon of climate change (Schewe et al., 2013).
World population has passed the 7 billion mark, with 1 billion still lacking potable water and several children under the age of 14 reportedly, dying due to unsanitary water supply (UNEP, 2000). This is mostly reflected in poor people who are hardest hit (Narayan et al., 2000). A report by the 2020 Vision for Food, Agriculture and the Environment Initiative (Rosegrant et al., 2002), predicted that if managers of water policies continued under the perceived inadequacies, farmers may not be able to meet global food demands (Narayan et al., 2000).

Based on several researches, developed and developing nations began to re-examine laws regulating water supply, while encouraging local experts and consultants to recommend needed changes (Trelease 1977; Schulz, 2001). Scholars, therefore, made inquiries about how to enable effective management of water, which may sustain the sector (Bakker, 2003). Regardless of efforts, within the last century, usage of water has grown at more than twice the rate of population increase, many regions of the world are therefore, increasingly experiencing chronic potable water shortage (UN, 2006). This has several implications, which cause grave concern and efforts in preserving the resource (Louka, 2008). Ben Franklin (1733) wrote that, “When the well is dry, we have learnt the worth of water”. Thus, the best way to solve emerging threats of potable water scarcity is to have a re-think on how we use and manage our scarce water resources.

An earlier prediction that by 2025, millions of people may still be living in countries or regions with scarcity has become discomforting (UN, 2006). Due to challenges facing potable water sector globally, the projection of The WHO/UNICEF Joint Monitoring Program (JMP) for water supply and sanitation is to halve the number of people without access to potable water and basic sanitation by 2015 (WHO and UNICEF Joint Monitoring Program, 2012). By their report, over 2 billion more people used improved potable water sources in 2010 than in 1990, while 780 million people are still without improved sources of potable water and many more lack the
General introduction

supply. Thus, the prediction for 2015 has not been realistic, considering prevailing continuing and un-abating challenging circumstances of water sector management. Thus, the anxiety may correspond with the impact of potable water on socio-economic development, vital for good health, economic management and employment opportunities.

The fast depleting freshwater and groundwater (Sekler et al., 1999) also raise questions on the development of key sectors of education, health, economics and agriculture (Gleick, 2003). One in three persons may be affected (WHO, 2010a). This implies that global aspiration of meeting 21st century challenges in human, capital and infrastructural development for environmental healthy living, food energy and capacity to subdue climatic changes may become a mirage due to non-improvement of manageability and access to potable water supply.

Socio-economic and political implications of rural potable water in the world order is a reality resonating in developing nations, where groundwater and freshwater levels are failing speedily (Acreman, 1998; Sekler et al., 1999). Out of twenty nations identified globally as experiencing potable water scarcity by the index of annual renewable water resources of less than 1,000 cubic metres per capita, nine were reportedly in Africa (World Bank, 1996). This fact elicits the reflection that generally, although safe water is scarce for most people, but, the situation is further exacerbated in developing nations (Heinonen-Tanski, 2012). This assertion may be substantiated in the average United Nations (UN) recommendation for potable water usage for human consumption, which is 50 litres per day for daily meals preparation, drinking, toilet flushing and personal hygiene (WHO, 2010b; UN, 2012). However, in Africa, daily water usage is 20 litres (Institute of Water for Africa, 2012), indicating a more profound scarcity of the resource on the continent.
Researches on causal factors of potable water challenges indicate that, of all natural resources, water is perhaps the most polluted and contaminated via anthropocentric activities (Alves and Rosa, 2007). In this regard, the World Bank declared that Nigeria ranked fourth in water pollution activities in Africa (Chokor, 1993; World Bank, 2003). These activities may be the introduction of unwanted materials having potentials for threats to the existence of human beings and other natural systems (Galadima et al., 2011). While the consequences of water pollution may have devastating effects on humans, animals and plants in the country, socio-economic implications are indicated for every sector of the society (Helmer and Hespanhol, 1997). Thus, in the Northern drier regions of the nation, the risk of desertification, extreme dry, hot weather and low groundwater level may exacerbate the problem, while in the Southern region, pollution of potable water resources is an added challenge to Nigeria’s environmental problems.

As a result of these emerging issues, several arguments, aimed at stemming scarcity of water and protecting it for a sustainable delivery in Nigeria have ensued. They include criticisms on inadequacies in resource management. Nwosu (2006), Orubu (2006), Ogbodo (2010) and Orisakwe and Frazzoli (2011) have argued, that, while several reasons may be adduced for sectoral failure of sustainable water by the managers, the predominant challenge is non-participation of non-state actors. They have therefore, prescribed collaboration of stakeholders. However, literature in Nigeria hardly goes beyond this kind of assertion. Writers have not been forthcoming on suggestions for a holistic structure, elastic enough to accommodate the fusion of state and non-state actors in participation and collaboration, exploration of contemporaneous approaches, techniques and methodology. These may be deemed as critical for efficient potable water management. The literature of some developing countries of the world, such as South Africa (Kidd, 2008) and Ghana (Harris and Morinville, 2013), identify sustained efforts at implementing the participatory processes. These countries practice
efficiency in delivering potable water supply by participatory approaches. They are specifically, designed to meet peculiar challenges of rural communities. In line with this reformative ambience, consensus has emerged at international fora on the need to develop potable water access and usage on the basis of community members’ consultation (Harris and Morinville, 2013). This includes direct engagement with poor rural dwellers (Ahmad, 2003). This is because, although the range of institutions playing important roles in poor peoples’ lives is vast, those same poor people are however, precluded from participating in governance, while state institutions do not respond nor provide accountability to the poor (Narayan et al. 2000).

1.2 PROBLEM STATEMENT
Current Nigeria legal framework supporting potable water supply has not been effective, due to non-participation of a broad spectrum of stakeholders- particularly the rural community members. However, contextualised policy re-orientation, which is practicalised and the acceptance of participatory governance, may, support the development of a more sustainable potable water supply in the rural communities of the country.

1.3 RESEARCH QUESTION
How can participatory water governance framework be effectively used to support the legal framework for potable water supply in the rural communities of Nigeria?

1.4 RESEARCH AIM AND OBJECTIVES
In answering the research question, this study aims to develop a participatory water governance framework to support potable water supply in the rural communities of Nigeria. To arrive at this, the study will concentrate on nine main objectives:
1. To undertake a critical review of existing literature on the sources, state and management of potable water resources in Nigeria.

2. To review the literature on the implementation of the current legal framework for potable water provision in Nigeria and reflect this within the concept of sustainable development.

3. To identify and review governance theory to reveal an understanding of the principles of transparency, accountability and participation (TAP), which reflect in the participatory process and Human Rights to water.

4. To develop a conceptual framework of participatory water governance (based on the literature reviewed under Objective 1 above and the principles arising from Objective 2 and 3 above).

5. To review existing literature on research methodology and reflect this on the research design.

6. To collect and analyse primary data to test the workings and connectors identified by the conceptual framework, with particular attention to the participation theory and the role of third parties.

7. To appraise the findings emerging from the results of the primary data based on the inquiry of the participatory water governance framework referred to in Objectives 4 and 6 above.

8. To refine the conceptual framework based on the findings referred to in Objective 7 above and to validate same.

9. To draw conclusions on the effective participatory water governance framework and make recommendations for adoptable practice in Nigeria.
1.5 RESEARCH PHILOSOPHY

Research philosophy is considered relevant in this research writing to identify the philosophical underpinning, on which the research is anchored upon. It is discussed further in the following sections.

1.5.1 Social Constructivism

The philosophical underpinning of the study is social constructivism (Mertens, 1998), regarded as an approach of qualitative research (Creswell, 2009). Some researchers refer to it as ‘interpretivism’ (Mertens, 1998; Burr, 2003), which focuses on how individuals construct and make meanings of their world and how the social world is interpreted by individuals involved in it (Robson, 2011). It indicates the way we create meanings through social interaction with others. Social constructivism provides multiple representations of reality, which also represents real world complexities (Bryman, 2008). Thus, thoughtful reflection on experiences and collaborative construction of knowledge, through social negotiation may be encouraged for pragmatic understanding of meanings and actions, which may not be covered by laws (Miles and Huberman, 1994).

Constructivism supports collaborative construction of knowledge, through social negotiation and a major advantage of social constructivism is contextualization rather than abstraction (Creswell, 2007). Thus, the provision of real world case-based environments, discourages pre-determined sequences, authenticates tasks, while historical and cultural norms operating in individuals’ lives are better understood (Crotty, 1998). The qualitative approach was therefore, considered appropriate in the primary and secondary inquiries on the conceptual framework for participatory water governance (PWG) for rural communities.
Several researchers, such as Berger and Luekmann (1967), Lincoln and Guba (1985), Miles and Huberman (1994), Crotty (1998), Neuman (2000), Schwandt (2007) have been identified with constructivism. By adopting the philosophical underpinning of social constructivism, this study will rely on the participants’ perceptions in the inquiry about the conceptual framework for PWG.

1.5.2 Environmental Ethics: Stewardship/Sustainable Development

Environmental ethics may be regarded as the moral relationship between human beings and the environment (Stanford Encyclopedia of Philosophy, 2002). Thus, human stewardship for the natural world (Stenmark, 2002; Schmidtz and Willott, 2002; Brennan and Lo, 2007) is the underpinning for the environmental ethic of this research. The responsibility of caring for the natural world and managing it sustainably for future generations is referred to as stewardship, which Jeremy Bentham (1832) personalized by declaring thus:

“Create all the happiness you are able to create, remove all the misery you are able to remove. Every day will allow you—will invite you to add something to the pleasure of others...or to diminish something of their pains. And for every grain of enjoyment you sow in the bosom of another, you shall find a harvest in your own bosom, while every sorrow, which you pluck out from the thoughts and feelings of a fellow creature, shall be replaced by beautiful flowers of peace and joy in the sanctuary of your soul” (Bentham, 1832).

Palmer (2006) emphasised that stewardship is an anthropocentric ethic, considered to be more beneficial (not only for humans, but for the rest of the natural world), for nature to be managed and made fruitful by human standards. Stewardship is based on human capacity to cause alterations to the natural environment and his knowledge of the consequences of such actions. This creates obligations to exercise such ability sagaciously, so that nature and future generations may benefit.
The platform for sustainable development (WCED, 1992), emerges from environmental ethic. Leopold (1949) was reputed to have championed environmental stewardship, based on land ethic, which pertains to human relationship to land, animals and plants growing on it. Stewardship has thus, considerably dominated the discourse of human relationship with environmental systems. It threads through the concept of sustainable development (SD), which most environmental laws advocate contemporarily (Maccari, 2014). However, SD cannot occur, unless there is enthusiasm in understanding the importance of the environment and its constituents (International Council for Science, 2003), such as potable water. This may only be fostered by education and knowledge. Thus, the question of whether it is the duty of Nigerian government, in the capacity of trusteeship (stewardship) to enable potable water supply or whether, the people possess the right to access potable water will be discussed under the Human Rights to water supply. The outflow of this research, therefore, indicates that, the maxim of one’s action should be fundamentally focused on a general action having potentials for universality. Thus, the right to water supply has assumed a mantra as a result of universality and applicability of water status. Flowing from the foregoing, it may be argued that, provision of potable water in Nigeria is inundated with challenges, while politics rather than stewardship, often influence its access.

1.6 RESEARCH METHODOLOGY

Literature review will be predominantly used to collect information on the subject matter. The semi-structured interview strategy in the qualitative approach, will serve for the purpose of inquiry, in which information, necessary for researching the development of PWG in supporting the legal framework for potable water will be collected, transcribed, coded and analyzed. The strategy will provide factual information, perceptions and examples to enable initial testing of evidence in the problem statement. The sampling strategy is anchored on Delta State of Nigeria, while findings will be validated by respondents, who are experts.
The study is adopting the socio-legal research approach, in which empiricism is enshrined for the inquiry of the PWG framework. Socio-Legal research is the branch of legal scholarship advancing social sciences methods, illuminating the dynamics of law and legal institutions, based on strong empiricism (Banakar and Travers, 2005). This type of research may be applied by researchers possessing sound understanding of legal background and training in social research methodology (Adler, 2007).

In the milieu of socio-legal research studies, empirical and social theoretical methodology predominate (Bradney, 1998) rather than the doctrinal methodology (Gasiokwu, 1993), which does not focus on interdisciplinary research (Banakar and Travers, 2005). Scholars in the socio-legal studies have, however, been able to bridge the chasm between law and sociological studies, social policy and economics, by inter-disciplinary studies (Banakar and Travers, 2005). This involves investigating the origins, operations and effects of legal framework, policies and policy management, by exploring the theoretical and methodological foundations within the social sciences. Law as a social phenomenon is the touchstone, distinct from the legal scholarship, rooted in the black letter tradition (Mcleod, 2010).

Researchers in the jurisprudential milieu, who build upon philosophical approach to law, also practice the social theory of knowledge, consisting of theoretical and empirical analyses, the nature of law and its relationship to society, within a contextually shifting world (Adler, 2007). By delving into the historical contemporariness of social, economic and political factors, socio-legal research creates an avenue for the expression of law and legal processes development. Laws’ operation is, thus, examined by contextualization, in which the real world experiences of persons affected by laws’ process are empirically analysed (Robson, 2011).
1.7 ORGANISATION OF THE THESIS

The description of the systematic flow of the chapters is hereby presented, while a flow chart represents it (Figure 1.1).

Chapter 1: General Introduction

The chapter presents the thesis overview with discussions centred on the background, problem statement and the research question. These are followed by a discussion on the research aim and objectives. The chapter discusses the research philosophy, followed by the research methodology. Following closely is the organisation of the thesis, while the scope and expected outcome of the research precede the chapter summary.

Chapter 2: The Sources, State and Effective Management of Potable Water Resources in Nigeria

The chapter identifies with Objective 1 and is mainly concerned with the literature review of the sources, state and management of potable water in Nigeria and the sectoral challenges in these. The impact of potable water on other sectors is examined. It also discusses the institutions managing the potable water sector.

Chapter 3: Implementation of the Legal Framework for Potable Water Supply in Nigeria

The chapter identifies with Objective 2 of the study. It examines the implications of legal dualism in the interpretations of legal matters, the implementation and effectiveness of existing legal framework, inherent challenges in policy implementation, enforcement and compliance. The chapter examines the concept of SD as fulcrum for policy development.
Chapter 4: The Theory of Good Governance

The fourth chapter is based on Objective 3. It examines and contextualises the good governance theory. It internationalises the import, while stating the constraints, dimensions and elements in application. The chapter conceptualises participation, examines its evolution, international recognition, potentials, constraints, nexus to the application of Human Rights and the roles of stakeholders in collaborative action. The chapter reviews some notable emerging participatory water governance models and countries already practicing the participatory process.

Chapter 5: Conceptual Framework Development for Participatory Water Governance in Nigeria

The fifth chapter is a reflection of Objective 4. The proposed conceptual framework for PWG in Nigeria is contextualised and planned, while the general constraints in developing it are stated. The implications inherent in the collaboration of third parties, such as the corporate organisations and Non-Governmental Organisations as donors are examined to justify the need for collaboration for PWG in rural communities.

Chapter 6: Research Design and Methodology

The chapter reflects Objective 5 and discusses the research design and methodology adopted in the study. In adopting the qualitative approach, the chapter identifies the semi-structured interview strategy as most appropriate for the inquiry into the PWG framework for potable water supply. The purposive sampling strategy is adopted and the homogeneous, heterogeneous and criteria sampling techniques are used in data collection, while the thematic analysis approach is adopted for data analysis. The chapter discusses the validation of findings and strategies that may be used.
Chapter 7: Primary Data Collection and Analysis of Results

The chapter is based on the provision of Objective 6. Data is collected and the transcripts from the semi-structured interviews are analysed for results of inquiry, using thematic analysis enabled by Nvivo 10 software in the CAQDAS package. The chapter states the adopted procedure for coding via the Nvivo 10 software.

Chapter 8: Participatory Water Governance Framework Inquiry: Analysis of Findings.

The chapter is based on Objective 7. It reports the findings, based on results from the data analysed, states the implications of findings, techniques for RAB governance and summary of thematic analysis.

Chapter 9: Conceptual Framework Refinement and Validation

The chapter is based on Objective 8, in which the findings are used to refine the conceptual framework. The chapter states the input of the refined conceptual framework and provides information discussion. The chapter also discusses adopted techniques for validating the refined conceptual framework, based on findings referred to in Objective 7 and provides a summary of the validation exercise.

Chapter 10: Conclusions and Recommendations

The chapter is identified with Objective 9. The chapter discusses the research limitations from general and specific perspectives. The study is brought to a conclusion by reviewing the research objectives and the research findings. The chapter states the general and specific implications of the research findings, contributions to knowledge and recommendations for adoptable practice and final reflections.
1.8 SCOPE AND EXPECTED RESEARCH OUTCOME

Based on the aim and objectives, the scope of the study focuses on the various sources of potable water supply in Nigeria. In identifying these, the study seeks clarity on the status with regard to scarcity and pollution. The study states how potable water is institutionally managed and identifies management challenges associated with it. The study’s major concern is on the issue of participation of a broad spectrum of stakeholders- notably, the rural community members in the management of potable water and how PWG may assuage management challenges. Gaps in the effective management of potable water supply are largely due to the exclusion of non-state actors in the management, although they constitute majority of the stakeholders. Absence of participation is, therefore, a major cause for sectoral ineffectiveness experienced in Nigeria. Thus, the study is an advocacy for rigorous collaborative efforts from state and non-state actors of the water resource. However, although the study is limited in identifying how much such advocacy may cost, it is regarded as a platform for implementing PWG in potable water management.

Delta State is the study focus setting for the findings but, the principles embedded in the PWG framework has national applicability, which may also be practicable in other developing African nations having similar cultural identity with Nigeria. The findings may, therefore, not be far removed from those of other countries, where the theory of participation is the hallmark of the success in environmental management- particularly, potable water.

In realising the aim and objectives of the study, the expected outcomes include the analysis of beneficial implementation of the theory of participation, to assuage the hardship of potable water management, which may reflect in the improvement of implementation. Participation theory, may improve unity of purpose for supply of water, maintenance of infrastructure,
payment of water rates, effective co-ordination of broad-based collaboration, information and promotion of a democratic method of water governance.

Figure 1.1: Chapter organisation of the thesis
1.9 CHAPTER SUMMARY

The Chapter presented an overview of the thesis. The various subject matter are foundational for the purpose of the researching activities. They are therefore regarded as guides to the successful completion of the study. The chapter’s discussion was centred on the background to the study, the problem statement, research question, aim and objectives. The chapter discussed social constructivism and environmental ethics as philosophical underpinning of the study. The chapter discussed the research methodology, the organisation of the thesis and the research scope and expected outcome.
CHAPTER 2: THE SOURCES, STATE AND MANAGEMENT OF POTABLE WATER RESOURCES IN NIGERIA

2.0 INTRODUCTION
The first objective is to critically review existing literature on sources, state and management of potable water resources in Nigeria. The understanding of the sources of potable water is important for establishing the benefits accruing from PWG (Harris and Morinville, 2013). In aligning with this view, the chapter identifies the various sources of water in Nigeria and their existing state. While the dominant challenges of scarcity and pollution are discussed as the current state of the resource, they are identified as indicators of institutional management challenges in Nigeria. Population explosion, increased urbanization, industrialization and climate change are implicated for scarcity, while oil spill is identified as predominantly responsible for pollution of water resources in Delta State of Nigeria. The effects of water scarcity are evident in their nexus to other sectors. Oil spill effects on water supply are examined, while the general state of potable water serve as foundation for subsequent arguments on the relevance of a redefinition of the legal framework supporting potable water supply in subsequent chapters.

2.1 SOURCES OF POTABLE WATER IN NIGERIA
In Nigeria (Figure 2.1), water resources consist of freshwater and marine water. While the marine water includes lagoons and oceans, freshwater consists of rivers and their plains, streams, lakes, wetlands and underground water reservoirs (Heinonen-Tanski, 2012). Freshwater resources, which includes potable water are the thrust of this study. Potable water derives from three major sources. Surface water, classified as water from rivers, streams, lakes, ponds and reservoirs (Orubu, 2006); Ground water consisting of springs gushing out of the rocks
The sources, state and management of potable water resources in Nigeria

(Enger et al., 1983), aquifer (which is water in water bearing rocks in the ground and bore-holes), dug into the rocks in the bowels of the earth (Okafor, 1989); Atmospheric water in form of precipitation, which is the source of water for most rural poor (Okafor, 1989). These sources are represented in a flowchart (Figure 2.2).

Potable water sources may be susceptible to changes in weather and climate, which profoundly affect the supply (Orubu, 2006). The problem of water shortage is prominent in the North of Nigeria, due to harsh weather condition (Kundell, 2008), which may render dug-out wells, surface water beds and ground water dry for most part of the year (Ishaku, 2011). Conversely, Nigeria’s coastline in the South is low-lying (Okonta and Douglas, 2003). The region is susceptible and vulnerable to water level rise as a result of climate change (Orisakwe and Frazzoli, 2012), while the low-lying nature of the coastline causes sea-water intrusion into coastal fresh-water resources, causing aquatic damage, erosion and flooding (Heinonen-Tanski, 2012).

Figure 2.1: Map of Nigeria showing 36 states with Delta State on the southern coast
Source: www.nationline.org Copyright approval provided (Appendix 14.1)
2.1.1 Definition of Potable Water

The etymological foundation of potable is *potabilis*, which derives from Latin and used in Middle English (Merriam-Webster, 2016). The term indicates a liquid that is suitable for drinking—such as alcoholic beverages and water. In this study, potable water refers to water that is fit or suitable for drinking by humans and other animals and may also be referred to as drinking water (Dictionary.com, 2016). The quality of water that may be supplied to consumers may be outside the scope of this study in the discussion of the PWG by the rural advisory board, which is conceptualized in the framework.

2.1.2 Means of Accessing Potable Water Supply in Nigeria

The major sources of potable water for rural community members is surface water (Gbadegesin and Olorunfemi, 2007), while those in the urban and semi-urban areas rely on water vendors.
for domestic uses and bottled water for drinking (Ajai, 2012). Majority of averagely placed persons in the urban and semi-urban communities also rely on groundwater in form of boreholes in their premises (Ajai, 2012). Generally, most Nigerians source their own water (Akpabio, 2012). Only 60% urban community persons are able to access potable water, while less than 50% rural community members are able to do so (Gbadegesin and Olorunfemi, 2009). 85% Nigerians source water for domestic use (which may not be regarded as potable), privately from untreated boreholes or dug-out wells (Ajai, 2012).

2.1.3 The Uses of Potable Water

As a life sustaining resource, water is necessary for the survival of all known organisms (Sultana and Loftus, 2012). Thus, its global recognition as an important factor for socio-economic development is documented in several literatures. In Nigeria, water resource supports a myriad of economic activities with limitless usage (Pimentel, et al., 2004). For example, it is used for domestic purposes, as main source of life for aquatic creatures and as source of transportation. Water provides components for agricultural activities and regulates climatic weather patterns of planet earth in the form of rain, temperature and winds by complex global water cycle (Akpor and Muchie, 2011). It sustains life by providing a balance in the wind and air structure on earth and in providing oxygen and hydrogen (Akpor and Muchie, 2011). Water may be used for electrical power generation and hydrological energy through damming.

In providing health benefits for the human body, water may be used for pharmaceutical productions, while its regularity and quality ensures reduction of several diseases (Chamberlain, 2008). It is considered important in providing ecological sanitation for environmental cleansing (Gupta, 1988). Water creates ecological earth balance by balancing its spread through river basins, lakes and other water bodies (Gupta, 1988) and may be commercialised for sustenance
and employment purposes. This may be realised when its potentials are explored for recreational benefits, such as swimming, boating, cruising and such others. These activities have potentials for tourist attraction, capable of generating funds. Potable water is also used for spiritual and religious ablutions and purification (Chamberlain, 2008).

Notwithstanding the numerous uses of water, scholars have questioned the state of Nigeria potable water, arising from sectoral challenges. This has elicited several research responses, such as the relevance of recalling the historical antecedence of the resource, in order to identify the foundational problems (Hassan, 2015).

### 2.1.4 Historical Antecedent of Potable Water Supply in Nigeria

Historically, in the early 20th century, Nigeria potable water was supplied only in selected towns, such as Calabar, Lagos, Ibadan, Abeokuta, Enugu, Ijebu-Ode and Kano (Ishaku et al., 2011). Infrastructural maintenance was based on revenue from water sales and not government subventions (Ishaku et al., 2011). The creation of regional governments in the 1950s, however, enabled the take-over of supervisory responsibilities of technicalities and infrastructural maintenance (Ibok and Daniel, 2014).

The Federal government assumed responsibilities for managing potable water in 1976, by creating the Federal Ministry of Water Resources (FMWR) and eleven River Basin Development Authorities (RBDAs) (Goldface-Irokalibe, 2006). Their major duty was the provision of water for irrigational purposes, in mostly rural communities, excluding potable water provision (Goldface-Irokalibe, 2006). Following the National Water Supply and Sanitation Policy\(^1\), the provision and

---

\(^1\) January, 2000.
management of potable water became the responsibility of the federal, state and local governments, respectively. The effort yielded minimal results, as potable water supply has remained scarce, while the management has been adjudged ineffective (Akpor and Muchie, 2011). The historical metamorphosis of FMWR indicates confusion and uncertainty, which was the hallmark of the ministry, identified in the series of changes, without corresponding service improvement.

The Federal Ministry of Water Resources (2013) provides the information of changes that FMWR was established in 1976 to formulate the National water development policies and co-ordinate their development. There was only one operational department called Federal Department of Water Resources with Sokoto/Rima Basin Authority as parastatal, having the same responsibility as Rima and Chad Development Authority. FMWR was merged with Federal Ministry of Agriculture and had 11 River Basin Development Authorities (RBDAs). It was further recreated in 1979 in another merger recreation with the Federal Ministry of Agriculture, Water Resources and Rural Development in 1984. This led to re-organisation of RBDAs into 18 RBDAs, with each of them having jurisdiction in the states, except Lagos and Ogun that were merged. In 1987, in another merger re-organisation, the 18 RBDAs reverted to 11. They were also relieved of some responsibilities of direct agricultural activities, food production, forestry and livestock development. Within 1989-2010, two other recreations occurred, following the separation of the Federal Ministry of Agriculture and Water Resources, resulting into FMWR and Federal Ministry of Agriculture and Rural Development, respectively, till date. Thus, the inconsistency in creating and re-creating the FMWR may be a part of management challenges since the past decades and reflecting in ineffective sectoral coordination, throughout the country.
2.2 THE STATE OF POTABLE WATER RESOURCES IN NIGERIA

Critics have argued that ineffectiveness in Nigeria potable water sector, results from water production facilities, which are rarely operated to capacity (World Bank, 2010). The World Bank had further argued that, this is due to ill maintained, broken down and obsolete equipment, power shortage and lack of fuel for generators to power boreholes. This argument may be challenged as lacking a holistic appraisal, since it pinpoints only infrastructural development challenges. The twin problems of scarcity and pollution are fundamental to the state of the resource and will be cited and discussed subsequently. These issues of scarcity and pollution indicate institutional management problems in the water sector. In summing up the challenges in the sector, the UNDP/IFAD (2015) argued that, “lack of basic services is often due to mismanagement, corruption, lack of appropriate institutions, bureaucratic inertia and shortage of new investments in building human capacity as well as physical infrastructure”.

2.2.1 Potable Water Scarcity in Nigeria

Insufficiency and unavailability of potable water resources in meeting water usage demands within a region, nation or state is water scarcity (UN, 2013). Scarcity implies ‘water stress’, which refers to difficulty in obtaining sources of freshwater for use at a particular period of time, resulting in further depletion and deterioration of available water resources (UNDP, 2006). Water stress occurs when the demand for water exceeds available amount in a certain period or, when poor quality restricts its use resulting in deterioration of quantity and quality of freshwater resources (European Environmental Agency, 2013).

Most people affected by water stress are in the category of the poor (Narayan et al., 2000) who may feel the impact of water crisis either in the dry or wet areas of Nigeria. For example, generally, during the dry and the harmattan seasons, the water bed in rivers, streams, ponds
The sources, state and management of potable water resources in Nigeria

and dug-wells dry up. It is immaterial whether it is in the North or Southern areas of Nigeria. Scarcity may also imply ‘water shortage’, caused by climate change, which alters weather patterns. It includes droughts, floods, increased pollution, human demands and over-usage (Abramovitz, 1996). There is drought in the Northern part of Nigeria, particularly during the harmattan and dry seasons, in which water beds dry-up. While there is also dryness in the South, the problem of flooding escalates during wet rainy season. Thus, already polluted water sources spread, rendering freshwater supply inadequate to meet users’ demands (Orisakwe and Frazzoli, 2012). Over-flooding may also cause sea water intrusion on freshwater. Farms and homes may become flooded and inaccessible, while farm yields are destroyed (Orisakwe and Frazzoli, 2012).

Another indication of water scarcity is ‘water crisis’, which may result when demand for unpolluted water in a region is more than the supply (Abramovitz, 1996). Physical water scarcity may, therefore, result from inadequate natural water resources, which supply a regional demand, while economic water scarcity may become critical, due to poor management of available water resources (Abramovitz, 1996). Water crisis may also manifest when potable water is inadequate or cannot be accessed for sanitation and waste disposal purposes. When groundwater has been subjected to excessive use, it may become critical and lead to diminished agricultural yields. Another result of water crisis is the over-use and pollution of potable water supply, which may degenerate into conflicts, resulting in unhealthy arguments, clash of interest and warfare (Sandford, 2012). These situations manifest in Nigeria and most communities labour under water crisis.

Water crisis is often ‘a crisis of governance’ (Global Water Partnership, 2000b; OECD, 2015), resulting in citizens sourcing their water privately. They rely on polluted water from surface or
groundwater or by sinking untreated private boreholes, adjudged unsuitable for usage. In the
cities, inhabitants purchase water originating from questionable sources, provided by vendors.

Potable water scarcity may be defined from the perspectives of existing and potential supply or
in terms of present and future demands or both (Sekler et al., 1990). Falkenmark and Lundqvist
(1989) adopted the supply side approach, which rate countries according to per capita amount
of annual water resources (AWR). They posit that 1,700 cubic centimetres per capita per year is
the level of water supply, above which water shortages will be local and rare. When water level
is below 1,000 cubic centimetres per capita per year, there will be indications that health,
economic development and human well-being may begin to be hampered (Falkenmark and
Lindh, 1976; Falkenmark and Lundqvist, 1995). At less than 500 cubic centimetres per capita per
year, it becomes expected that water availability may be a crucial primary constraint to living.
This standard indicator of water scarcity is widely used, referenced among countries and relied
upon by researchers (Engelman and Leroy, 1993).

In a research commissioned by the UN Commission on Sustainable Development, a similar
supply indicator was relied upon, that water scarcity could be identified in terms of the total
amount of annual withdrawals as a percentage of annual water renewal (AWR), which is
referred to as the ‘UN’ indicator (Raskin et al., 1997). This criterion demands that, if the total
withdrawals are greater than 40% of AWR, the country is deemed to be suffering from water
scarcity. This indicator is not free from peculiar problems, since the criterion for water scarcity
is primarily based on a country’s AWR without the necessary reference to present and future
demand or needs for water (Raskin, et al., 1997). To avert this problem therefore, the study
attempted to resolve by simulating the demand for water in relation to water supply over a
period of 1990 to 2025. This study is, however, not focused on a periodic study, but on the
general challenges associated with potable water supply and demand. It is therefore relying
upon the indications stated for deeming a country as having the problem of scarcity of
sustainable potable water. The position taken by Acreman (1998) seems simplistic but plausible. The writer argued that, when water resources are used at a faster rate than replenished, the resources may decline and the usage becomes unsustainable. Dearth of reliable data-base to provide information on demand and supply of potable water militates against accuracy and may provide conflicting reportage in Nigeria. A panacea to this challenge was suggested by the World Conference on Science (1998), that probabilistic approaches may be used in developing nations where, there is unavailable or insufficient data-base. However, the WHO/UNICEF (2010) and the World Bank (2010) data appear to provide a more acceptable and reliable information that, access to potable water stagnated at 47% from 1990 to 2006, increasing to 54% in 2010, particularly in the urban areas. By 2010, it recovered to 74% (WHO/UNICEF, 2010). The recovery notwithstanding, it is relevant to this study that, 46% of Nigeria rural population are still unable to access potable water (World Bank, 2010). Thus, the change for better may not be regarded as remarkable from that of only 36% rural community members’ access to potable water by the year 2000 (Federal Republic of Nigeria, 2000).

Based on the foregoing 2010 World Bank declaration, it is incumbent to identify water consumption rate in Nigeria to enable an understanding of the potable water supply dilemma of Nigerian citizens. The international water consumption figures provide that a person living in the urban area uses an average of 250 litres of water per day, although this figure may have variations around the world (Arms, 2008). Ayoade and Oyebande (1983) argued that, the total water needs in Nigerian houses with piped water and inside sanitation is at least 115 litres per person, per day. They opine that the actual quantity may be more, depending on ease and convenience of supply. The figure projected by them is however, above the UN’s suggestion that each person needs 20-50 litres of potable water per day, for basic needs in Nigeria (Ibok and Daniel, 2014). The UN’s suggestion is also at variance with the existing situation in advanced countries. For example, in the United Kingdom, daily domestic water consumption rate per
person is approximately 150 litres (Myers and Millar, 2012), while it is estimated at 250 litres per person per day for domestic uses in the United States of America (US Environment Protection Agency, 2011). Based on the UN’s recommendation on Nigeria water consumption, an arising question is- why is the citizen’s water demand rated lower than practicable elsewhere? A plausible argument could be that, Nigerians have been identified with low water consumption rate due to inaccessibility of the commodity in the past years (Ishaku et al., 2011).

It is thus, presumed that Nigerians may have also adjusted their mind-set towards practicing water conservation. The disparity in computation results in conflicting statements on the exact consumption rate in Nigeria, but the country is noted as being among nations with acute scarcity of potable water supply (New Joint Monitoring Programme, 2010). The documentation may not be un-connected with the report that Nigeria is counted among China, India, Ethiopia, Indonesia, Democratic Republic of the Congo, Bangladesh, United Republic of Tanzania, Sudan and Kenya, as countries without access to improved drinking water supply (WHO/New Joint Monitoring Programme Update, 2010). On the other hand, countries such as Malawi, Burkina Faso, Liberia, Ghana, Namibia and Gambia have performed above average of nearly 26% in terms of the proportion of the 2010 population, that gained access to improved drinking water sources since 1995 (WHO/New Joint Monitoring Programme Update, 2010).

The Federal Government of Nigeria designed water supply to exist within its domain, the 36 states and 774 Local Governments (Ajai, 2012). In the tripartite arrangement, rather than enabling decentralisation, capable of forging autonomic entities, more confusion has emerged in management policies, which lack autonomy because the Water Resources Act\(^2\) did not provide for such. The sector has been unsuccessful in advancing legitimate demands for potable water and the country has been adjudged in critical short supply of the commodity (World Bank, 1992).
This World Bank declaration echoes the postulation that, although Nigeria is endowed with abundant water resources, availability of potable water is a problem in many parts of the country, particularly in the rural communities (Goldface-Irokalibe, 2009). To buttress the assertion, Table 2.1 shows the percentage population of urban and rural Nigerians with access to potable water within the last few decades.

Table 2.1: Improved water source percentage population with access in Nigeria

<table>
<thead>
<tr>
<th>Year</th>
<th>Urban Population</th>
<th>Rural Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>81%</td>
<td>29%</td>
</tr>
<tr>
<td>1991</td>
<td>81%</td>
<td>30%</td>
</tr>
<tr>
<td>1992</td>
<td>80%</td>
<td>31%</td>
</tr>
<tr>
<td>1993</td>
<td>80%</td>
<td>31%</td>
</tr>
<tr>
<td>1994</td>
<td>80%</td>
<td>32%</td>
</tr>
<tr>
<td>1995</td>
<td>80%</td>
<td>33%</td>
</tr>
<tr>
<td>1996</td>
<td>79%</td>
<td>34%</td>
</tr>
<tr>
<td>1997</td>
<td>79%</td>
<td>35%</td>
</tr>
<tr>
<td>1998</td>
<td>79%</td>
<td>36%</td>
</tr>
<tr>
<td>1999</td>
<td>78%</td>
<td>54%</td>
</tr>
<tr>
<td>2000</td>
<td>78%</td>
<td>55%</td>
</tr>
<tr>
<td>2001</td>
<td>78%</td>
<td>55%</td>
</tr>
<tr>
<td>2002</td>
<td>78%</td>
<td>56%</td>
</tr>
<tr>
<td>2003</td>
<td>77%</td>
<td>57%</td>
</tr>
<tr>
<td>2004</td>
<td>77%</td>
<td>57%</td>
</tr>
<tr>
<td>2005</td>
<td>77%</td>
<td>58%</td>
</tr>
<tr>
<td>2006</td>
<td>77%</td>
<td>59%</td>
</tr>
<tr>
<td>2007</td>
<td>77%</td>
<td>44%</td>
</tr>
<tr>
<td>2008</td>
<td>76%</td>
<td>45%</td>
</tr>
<tr>
<td>2009</td>
<td>76%</td>
<td>46%</td>
</tr>
<tr>
<td>2010</td>
<td>75%</td>
<td>46%</td>
</tr>
<tr>
<td>2011</td>
<td>75%</td>
<td>47%</td>
</tr>
</tbody>
</table>


From the computation of the foregoing information, it is apparent that scarcity of potable water is predominant among rural communities, due to some general constraints (Table 2.2)

Table 2.2: General constraints affecting adequacy of rural potable water supply

<table>
<thead>
<tr>
<th>GENERAL CONSTRAINTS AFFECTING ADEQUACY OF POTABLE WATER SUPPLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of clarity and legislative incoherence (Ladan, 2012)</td>
</tr>
<tr>
<td>Dearth of deliberate policy addressing the peculiarities of water supply and sanitation challenges in the riverine and coastal communities (Orisakwe and Frazzoli, 2011)</td>
</tr>
<tr>
<td>Incoherence in functions and relationships of sector institutions (Ogbodo, 2010)</td>
</tr>
<tr>
<td>Unreliability/insufficiency of data for planning, evaluation and projection (Lindh, 1979)</td>
</tr>
<tr>
<td>Multi inter-play of interests (Orubu, 2006)</td>
</tr>
<tr>
<td>Inadequacy/insufficiency of power supply (Energy Sector Management Assistance Program, 2005)</td>
</tr>
<tr>
<td>Distribution system, technical/financial incapacity (Ebiye and Zejiao, 2010)</td>
</tr>
</tbody>
</table>
The sources, state and management of potable water resources in Nigeria

<table>
<thead>
<tr>
<th>Problem</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human resource development in-efficiency</td>
<td>Longe et al., 2010</td>
</tr>
<tr>
<td>Lack of public information on water conservation</td>
<td>Akpabio, 2011</td>
</tr>
<tr>
<td>Non-accountability (corruption)</td>
<td>Ogbedo, 2010</td>
</tr>
<tr>
<td>Dearth of dedicated manpower</td>
<td>Longe et al., 2010</td>
</tr>
<tr>
<td>Inadequate and low investment in water infrastructure</td>
<td>Akpabio, 2011</td>
</tr>
<tr>
<td>Wrong perception on water costing</td>
<td>Akpor and Muchie, 2011</td>
</tr>
<tr>
<td>Politicising of water supply</td>
<td>Akpabio, 2012</td>
</tr>
<tr>
<td>Convergence in policy decisions</td>
<td>Orubu, 2006</td>
</tr>
<tr>
<td>Insufficient strategizing policy</td>
<td>Akhionbare et al., 2007</td>
</tr>
<tr>
<td>Weak sector co-ordination</td>
<td>Akpabio, 2012</td>
</tr>
<tr>
<td>Limited participation of non-state actors</td>
<td>Hickey and Mohan, 2004</td>
</tr>
</tbody>
</table>

2.2.2 Major Causes of Potable Water Scarcity in Nigeria

Four major causes cited as responsible for potable water scarcity in Nigeria are: population explosion (Abaje et al., 2009), urbanisation (Hammond et al., 2012), industrialization (Cudworth, 2003) and climate change (Schewe et al., 2013). These major causes will be addressed in the following paragraphs.

**Population explosion** - As human population increases, freshwater demand also increases (Shiklomanov and Rodda, 2003). Over-population has thus, become one of the dominant challenges in international and national developmental planning (Ehrlich, 1968). No rational public policy can therefore, be developed, without cognizance to population issues (Ehrlich, 1968). Generally, water scarcity impacts on people’s lives in many world regions and population growth may increase freshwater demands even more (The Potsdam Institute for Climate Impact Research, 2013). Contextually, expanding population is a major cause of water scarcity in Nigeria (Abaje et al., 2009). By 2010, estimated total number of citizens was 159,424,742 million (UN World Population Review, 2016), contrasted with estimated number of 182,201,962 million people in 2015 (UN World Population Review, 2016). The country’s population history is documented from 1950-2016 (Table 2.3). Present Nigeria population represents 2.5% of world’s total population (UN World Population Review, 2016). From the review, one out of forty persons in the world regard Nigeria as their home. It also indicates that, several people may need potable
water supply accessibility, which may not be realisable without effective manageability. This is likely to portend more future challenges in water supply, for Nigeria. The UN population projection (UN World Population Review, 2016), represents Nigeria’s future dilemma on how to manage increased potable water crisis instigated by scarcity and a corresponding rising population (Table 2.4).

Table 2.3: Nigeria annual population history from 1950 to 2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>186,987,563</td>
<td>2.5598%</td>
</tr>
<tr>
<td>2015</td>
<td>182,201,962</td>
<td>2.5926%</td>
</tr>
<tr>
<td>2010</td>
<td>159,424,742</td>
<td>2.6895%</td>
</tr>
<tr>
<td>2005</td>
<td>139,611,303</td>
<td>2.6204%</td>
</tr>
<tr>
<td>2000</td>
<td>122,876,723</td>
<td>2.5219%</td>
</tr>
<tr>
<td>1995</td>
<td>108,424,821</td>
<td>2.4955%</td>
</tr>
<tr>
<td>1990</td>
<td>95,617,345</td>
<td>2.5485%</td>
</tr>
<tr>
<td>1985</td>
<td>83,901,570</td>
<td>2.6075%</td>
</tr>
<tr>
<td>1980</td>
<td>73,698,095</td>
<td>2.7192%</td>
</tr>
<tr>
<td>1975</td>
<td>63,565,598</td>
<td>2.8862%</td>
</tr>
<tr>
<td>1970</td>
<td>56,131,844</td>
<td>2.3277%</td>
</tr>
<tr>
<td>1965</td>
<td>50,238,569</td>
<td>2.1617%</td>
</tr>
<tr>
<td>1960</td>
<td>45,211,614</td>
<td>2.0416%</td>
</tr>
<tr>
<td>1955</td>
<td>41,122,333</td>
<td>1.8118%</td>
</tr>
<tr>
<td>1950</td>
<td>37,859,745</td>
<td>1.4984%</td>
</tr>
</tbody>
</table>


Table 2.4: Nigeria annual population projection from 2020 to 2095

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>206,830,983</td>
<td>2.4687%</td>
</tr>
<tr>
<td>2025</td>
<td>233,557,691</td>
<td>2.3776%</td>
</tr>
<tr>
<td>2030</td>
<td>262,599,107</td>
<td>2.2932%</td>
</tr>
<tr>
<td>2035</td>
<td>293,965,225</td>
<td>2.1999%</td>
</tr>
<tr>
<td>2040</td>
<td>327,405,630</td>
<td>2.0824%</td>
</tr>
<tr>
<td>2045</td>
<td>362,395,941</td>
<td>1.9518%</td>
</tr>
<tr>
<td>2050</td>
<td>398,507,703</td>
<td>1.8238%</td>
</tr>
<tr>
<td>2055</td>
<td>435,495,540</td>
<td>1.7043%</td>
</tr>
<tr>
<td>2060</td>
<td>473,123,062</td>
<td>1.5861%</td>
</tr>
<tr>
<td>2065</td>
<td>510,994,161</td>
<td>1.4736%</td>
</tr>
<tr>
<td>2070</td>
<td>548,863,098</td>
<td>1.3635%</td>
</tr>
<tr>
<td>2075</td>
<td>586,277,853</td>
<td>1.2517%</td>
</tr>
<tr>
<td>2080</td>
<td>622,731,111</td>
<td>1.1376%</td>
</tr>
<tr>
<td>2085</td>
<td>657,740,065</td>
<td>1.0324%</td>
</tr>
<tr>
<td>2090</td>
<td>691,183,213</td>
<td>0.9291%</td>
</tr>
<tr>
<td>2095</td>
<td>722,635,801</td>
<td>0.8358%</td>
</tr>
</tbody>
</table>

Urbanisation- By creating inevitable economic development, urbanisation may have also compounded population explosion challenges, due to large human convergence in urbanised areas from rural communities (Hammond et al., 2012). These persons provide human resource for formal/informal government establishments, government and private individuals’ housing developments and industrial companies. Thus, adverse impacts on potable water accessibility cannot be dismissed because, rural-urban migration affects ecosystem functionality by converting the land surface, while modifying the energy flow and available nutrients and water (George, 2006). These indicate that, urbanisation may be correctly regarded as a major indicator of potable water scarcity in Nigeria.

Industrialisation- Industrialisation is an important indicator of development, but, a major challenge is environmental pollution (Cudworth, 2003), which may result in scarcity of potable water (Meadows et al., 1972). Doubts may therefore, be raised over potable water quality (Ebiye and Zejiao, 2010). For example, the discovery of oil wells in Oloibri, Nigeria in 1958 carried with it, the implications of future environmental challenges. They became reflected in subsequent pollution of water resource by oil prospecting companies (Azaike, 2009). The scarcity of water supply has thus, been adduced to flaws in the legislative instruments guiding the process of industrialisation, internal industrial development (Auty and Brown, 1997) and the dynamics of potable water management.

Climate change- Globally, climate change may likely put more than 40% persons at risk of water scarcity, due to unabated greenhouse gas emission (Schewe et al., 2013). The advent of climate change in Nigeria has been cited as one of the reasons for scarcity of freshwater resources. This is resulting from increase in consumption (Orisakwe and Frazzoli, 2011), urbanisation and land use impact, agricultural activities and deforestation of lands. Potable water scarcity has, thus, become a major threat to human development in the country, since many of the citizens depend
on agriculture through irrigation, in which water is heavily utilized as source (Philpott, 2015). Change in precipitation is a challenge, as additional water triggers flooding, water logging and ineffective management of infrastructure (Lazarus, 2009). The major implication is that, growing economic development may be hampered, because heavy industrial processes require large quantities of water to make substantial progress.

2.2.3 Impact of Potable Water Scarcity on Other Sectors in Nigeria

Addressing the challenges of potable water scarcity may necessitate an inter-sectoral and multi-disciplinary approach. This is because of the inherently complex nature of potable water and its linkage to sectors, considered critical for development (Figure 2.3). Thus, due to inter-sectoral connectedness, water system is inextricably linked to other clusters of key sectors- health, economy, education and agriculture (Muta’allellandendu, 2012). This assertion has received endorsement from a recent declaration of the OECD (2015). Subsequent paragraphs of the study discuss this further.

2.2.3.1 Impact on Economy

Water scarcity may be argued to be one of the major limiting factors, having profound impacts on economic development in Nigeria (Serageldin, 1995). This is because, demand for potable water increases, just as the economy grows (Henderson and Parker, 2012). For example, potable water supply poses a challenge in many industries, since the cost of water supply in the manufacturing sector in Nigeria is encompassing, due to prevailing challenges in the power and energy sector (World Bank Report, 1996). A further opinion is that, water supply scarcity affects smaller firms more and reflects on their growth, while industries and employment of people may also be affected. Small firms are usually, financially handicapped to provide boreholes and the burden affects their productivity and development more than it does the larger firms. This
problem may in turn, affect production cost (World Bank Report, 1996). Due to scarcity, industries may rely on water from boreholes, through abstraction of groundwater for industrial operations (Onwuka and Adekunle, 1986). This may result in environmental challenges, caused by lowered water levels, land subsidence, destruction of public utilities, flooding and collapse of infrastructures (Onwuka and Adekunle, 1986).

2.2.3.2 Impact on Health Sector

Water and sanitation are the major drivers of primary health (John and Mark, 2003). Thus, many diseases (identified as endemic throughout Nigeria), are linked to unsatisfactory potable water supply (Hunter et al., 2010). Examples are cholera, guinea-worm and hook-worm infestation, infectious hepatitis, dysentery, gastro-enteritis and other numerous parasitic infections, implicated in reduced life-span of adult Nigerians and infant mortality (Federal Republic of Nigeria, 2007).

2.2.3.3 Impact on Educational Sector

Data collected by international agencies involved in researches indicate that specifically, water scarcity may be implicated for low enrolment of children in schools- especially girls, since they spend more time searching for potable water (Federal Republic of Nigeria, 2000). In Nigeria, less privileged children may often be seen with empty kegs, searching for potable water from streams or queuing to purchase it from vendors, while their privileged counterparts are in schools (Federal Republic of Nigeria, 2000). Socially, women are more exposed to social vices and criminal attacks, resulting from water scarcity, which compel them to travel far from their homes in search of the resource for their daily sustenance (Ifabiyi et al., 2010). Their aspiration for academic empowerment may be truncated by unpleasant experiences encountered in their search (Ifabiyi et al., 2010).
2.2.3.4 Impact on Agricultural Sector

Water supply has tremendous economic implications on agricultural practices (Toole, 2012). There are evidential proofs that, 70% of the freshwater utilised by man goes into agricultural practices globally (Baroni et al. 2007). The preponderance of evidence indicates also that, 70% of active labour force in Nigeria is employed in agricultural practices (George, 2006). Citizens rely on water as a means of transporting agricultural produce to mainland cities. Thus, the Federal Government of Nigeria, in response to citizens’ high reliance on water supply, identified the sector as a key developmental priority (Olawunmi, 2009). The Federal Government also responded to agitations for poverty reduction by 2015, through diversifying economy away from the oil sector (Aghalino, 2009). However, the projection has not been feasible, since scarcity of potable water impacts on agricultural produce, when the land is dry and un-yielding. This reflects in poor agricultural production, in which aquatic life, arable farming and animal husbandry are threatened with diminution in size, quantity and quality (Medugu, 2006). The UNDP/IFAD (2015) in reacting to the myriad of challenges in the water sector has argued that, "insufficiency of potable water is primarily driven by an inefficient supply of services rather than
The sources, state and management of potable water resources in Nigeria

by water shortages”. This opinion is weighty and may be interpreted to mean a further argument for the scarcity of potable water rather, than an outright rejection of the literature on impacts of water scarcity. The argument is hinged upon management challenges in the water sector, addressed as the study progresses in later chapters.

2.3 POTABLE WATER POLLUTION

Water pollution may be regarded as any contamination of water with chemicals or other foreign substances, detrimental to human, plant, or animal health (Okorodudu-Fubara, 1994). Examples of such substances are fertilizers, pesticides from agricultural run-offs, sewage and food processing wastes sites or oil from prospecting oil companies. Water is typically referred to as ‘polluted’ when there is impairment by anthropocentric contaminants (Koshal, 1976). The contaminants do not support human use, nor are they useful when they have undergone remarkable shift in supporting constituent biotic communities, such as fish and other aquatic creatures (Okorodudu-Fubara, 1994). This definition has attracted criticism that, no single measure of water quality exists, since there are dozens of specific physical, chemical and biological characteristics of a nation’s waters. The United States’ Federal Water Pollution Control Amendments Act 1972, also referred to as The Clean Water Act provides that ‘pollution is the man-made induced alteration of the physical, biological and radiological integrity of water’. The provision may however, be faulted as a wrong standard, on which to base the definition of pollution, under the presumption that the natural water quality is a norm, from which any deviation constitutes pollution. This is because, some waters are naturally hot, radioactive and toxic. They may have natural acidity or alkalinity, while some lakes, are naturally choked with algae or affected by eutrophication of lakes (which is a natural process in the aging) (Okorodudu-Fubara, 1998). Some oil seeps may naturally occur in large quantities and heavy
sediments may occur in flowing streams (Okorodudu-Fubara, 1994). This counter-argument may be buttressed by the fact that, human induced changes through the introduction of specific chemicals may indicate an improvement on water quality. A typical example is wastes containing lime, which may neutralise excess acidity of streams or ponds, so that aquatic life is supported with nutrients. However, the nutrients may deplete dissolved oxygen in the water and increase eutrophic conditions. The summary of the argument is that, it may be fallacious to presume that natural water may always be pollution free. Thus, “pollution is the presence of matters or energy, whose nature, location or quality produces undesired environmental effects” (Okorodudu-Fubara, 1998). The definition of ‘pollution’ has, thus, compartmentalized the word as a relative terminology. The research is, therefore, guided by the intended use of the water under study. Thus, in this study, water pollution refers explicitly to pollution of potable water resources in Nigeria.

2.3.1 Causes of Potable Water Pollution in Nigeria

A wide spectrum of causes of water pollution may be ascribed to pollution of water resources in Nigeria, which may aptly fit into what is expressed as “Water, water, everywhere and all the boards did shrink. Water, water everywhere, nor any drop to drink” (Coleridge, 1798). Thus, the theory of the sources of potable water pollution is an eye-opener on the most dangerous and debilitating sources. Many other forms of sources of pollution of water resources in Nigeria may be cited (Table 2.5). It is however, apparent that oil pollution produced by oil companies (Nossiter, 2010) exerts more toll on water resources in Nigeria, than any other source. Oil spills have thus, destroyed natural water resources, central to local livelihoods (UNDP, 2006). Subsequent paragraphs explicate this assertion.
Table 2.5: Causes of potable water pollution in Nigeria

<table>
<thead>
<tr>
<th>CAUSES OF WATER POLLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemicals, pathogens, physical or sensory charges such as temperature and discolouration (Okorodudu-Fubara, 1998).</td>
</tr>
<tr>
<td>Regulated substances naturally occurring as calcium, sodium, iron, manganese; natural and anthropocentric substances, which cause turbidity blocking light and disrupting plant life, clogging fish gills (EPA, 2005).</td>
</tr>
<tr>
<td>Oxygen depleting substances may be natural materials such as leaves, grass and man-made chemicals (Cookey et al., 2008)</td>
</tr>
<tr>
<td>Most chemicals are toxic so that pathogens can produce water-borne diseases in man and animal hosts, oil spills, by-products of gas flares also produce toxicity (Hogan, 2010).</td>
</tr>
<tr>
<td>Other causes may be inorganic water pollutants including acidity found in industrial by-products especially sulphur.</td>
</tr>
<tr>
<td>Chemical wastes as industrial by-products; chemical compounds found in personal hygiene and cosmetic products.</td>
</tr>
<tr>
<td>Tree and bush debris may likely cause pollution of potable water resource.</td>
</tr>
<tr>
<td>Petroleum hydrocarbons including fuel- such as gasoline, diesel, lubricants like motor oil, and combustion by-products from storm water run-off (Burton and Robert, 2001).</td>
</tr>
<tr>
<td>Indiscriminate disposal of human faeces into water resources contaminates it (Cookey et al., 2008).</td>
</tr>
<tr>
<td>Food processing wastes such as fats, grease, which include oxygen demanding substances.</td>
</tr>
<tr>
<td>Silt (sediment) in run-off from construction sites, logging, slash and burn practices or land clearing sites (Goel, 2006).</td>
</tr>
<tr>
<td>Floatables found mostly in urban storm run-off such as trash or garbage including papers, plastics, and food wastes discarded on the ground inadvertently or deliberately washed off by rainfall into storm drains and eventually discharged into surface waters.</td>
</tr>
<tr>
<td>Thermal pollution may occur when there is a rise and fall in temperature of natural water body caused by human influence, which results in a change in the physical property of water, caused by use of water as a coolant by power plants and industrial manufacturers.</td>
</tr>
<tr>
<td>High temperature may decrease oxygen level killing fish and altering food chain composition, reducing species biodiversity and fostering invasion by new thermophiles species (Goel, 2006).</td>
</tr>
</tbody>
</table>

2.3.2 Pollution of Potable Water Supply by Oil Spills in Nigeria

Samuel Taylor Coleridge’s poem indicates environmental agony with all the complexities. His declaration, “About, about in reel and rout, the death fires danced at night. The water like a witch’s oil, burnt green and blue and white” (Coleridge, 1798), may be adapted to Nigeria’s dilemma. Freshwater overwhelms the land mass, particularly, to the South and Central districts of Delta State, yet, there is dearth of potable water. A major reason ascribed is pollution of water by oil spills. Oil exploration in the South and Central districts of Delta State of Nigeria carries with it discordant notes, in which the environment may become pluralised in armed conflicts, while oil challenges principally surface in spillages, which have assumed regular occurrence in the state, affecting the ecosystem (particularly, water resources) and human beings (Offu, 2012).
2.3.3 Effects of Oil Spillage on Potable Water in Nigeria

Several consequences attend the challenge of oil spillage on water supply. Some of the effects impact on water supply by implication. Thus, oil spills may impact on the ecosystem in the destruction of mangrove swamp forest (Limson, 2002). This results from oil, spreading almost immediately it is released, affecting everything in its path, notably, when the water temperature is high (Akpofure et al., 2013). There is expected depletion of fish and aquatic life as a result of oil slick; destruction of farmlands; incursion of water hyacinth, which thrives in polluted environments, causing difficulty in navigation and competing for sunlight with other aquatic lives and depletion of oxygen (Tacio, 2009). General health implications have been identified by researchers, who hypothesise that polluted water supply directly, affect people’s health, through exposure to water related diseases (Esrey et al., 1991; World Bank, 1993; Brockerhoff, 1995; Sangodoyin, 1995; Hoddinot, 1997; Cadmus et al., 1999).

The reality that water pollution attracts several challenging issues (Etemire, 2016), calls for mitigating efforts (World Conference on Science, 1998). The challenges indicate ineffective institutional management, criticised by several writers (Orisakwe and Frazzoli, 2011; Ladan, 2011). The following sections identify the institutional management for potable water.

2.4 INSTITUTIONAL MANAGEMENT OF POTABLE WATER IN NIGERIA

Administration of potable water has centralised management system in Nigeria (Federal Republic of Nigeria, 2000), despite major differences caused by disparity in weather conditions between the Northern and Southern regions. Authority for the various institutions stems from enacted laws, formulated by the National and State Assemblies, under the Constitution of the Federal Republic of Nigeria 1999\(^4\) mandate. These enactments are passed on to agencies

\(^4\) Section 58 (1)
managing potable water supply. The regulations flow from the laws, while the institutions formulate guiding policies, applicable up to the local government level. The Courts, being the last bastion for justice are approached by state and non-state actors for resolution of conflict or interpretation of laws. The management of potable water resource in Nigeria (Figure 2.4) is discussed in the following paragraphs.

2.4.1 Federal Ministry of Water Resources (FMWR)

FMWR develops procedures of new water sources for potable water supply, construction guidelines for water facilities and treatment requirements (World Bank, 2000). State Ministries implement procedures developed by FMWR. FMWR supervises elaboration of water safety plans by water services providers, including state water agencies. Water safety plans are evaluated by state departments of water safety and enforced by inspectors. They compile data on surface and ground water quality and provide the data to the FMH and other relevant agencies (World Bank, 2000).

The FMWR declares its policy as one that provides sustainable access to safe and sufficient water (FMWR, 2013). This is intended to meet the socio economic needs of Nigerians, through efficient water resources management. This will be for basic human needs, irrigation, agriculture,
hydropower generation for national food security, promotion of healthy population, while maintaining the integrity of freshwater bodies. FMWR envisions being the vehicle of the nation’s water resource management for optimal socio-economic activities, through comprehensive planning for integrated conservation, development and management of various water uses. FMWR preserves quantity and quality of freshwater, for improved ecosystem and environmental protection and facilitates adequate access to safe water and sanitation nationwide. A part of this policy also lays emphasis on developing irrigated agriculture for food security and sustainable livelihood. The institution may also ensure equitable allocation of all the afore-mentioned, amongst all riparian communities and internationally (FMWR, 2013).

2.4.2 Federal Ministry of Health (FMH)

FMH is the leading Nigerian institution enforcing drinking water quality standards, through existing division of water safety, solely responsible for drinking water quality, surveillance and enforcement (FMH, 2015). It operates at the state level through the Division of Water Safety. It implements strategies and procedures, issued at federal level. The ministry produces professionals with skills in drinking water engineering, public health, public water testing, drinking water quality inspection and enforcement, data management and communication (FMH, 2015). State departments include inspectors in charge of drinking water quality, investigations, water sampling and sanitary inspection, enforcement of Nigeria drinking water standards in state and local government health department (FMH, 2015).

2.4.3 Federal Ministry of Environment (FME)

The FME, in consultation with other agencies, is responsible for developing procedures for establishing protection zones and water sources intended for human consumption (FME, 2015). The ministry passes information about any water contamination in the protected zones to the
Federal Ministry of Health and drinking water service providers. It protects, restores, and preserves watershed, while state ministries and agencies, implement protection zones and control activities in the protection zones. FME’s major policy is environmental protection, which is paramount to achieving the objective of the country’s socio-economic reforms— for example, National Economic Empowerment Development Strategy (NEEDS) and other regional and global initiatives such as the New Partnership for African Development (NEPAD), MDG and the Johannesburg Plan of Implementation (JPOI) (Nigeria Industrial Standard, 2007). FME prepares comprehensive national policy for environmental protection and conservation of natural resources. This includes procedures for environmental impact assessment of all development projects. The institution prepares in accordance with NPE, periodic master-plans for re-development of environmental technology and advises the Federal Government on the financial requirements for implementing such plans. FME also advises the federal government on national environmental policies and priorities, which involve the conservation of natural resources and sustainable development, science and technology activities affecting the environment and natural science. Cooperation in environmental science and technology is promoted with similar bodies in other countries and with international bodies connected with environmental protection and conservation of natural resources. It also cooperates with Federal and State ministries, local governments, statutory bodies and research agencies on matters and facilities relating to environmental protection and natural resources conservation. It prescribes and makes regulations for water quality, effluent limitation and quality, atmospheric protection, ozone protection, noise control and the removal and control of hazardous substances. The institution also monitors and enforces environmental protection measures (FME, 2015).
2.4.4 Standard Organisation of Nigeria (SON)
SON establishes standards for quality materials, equipment and treatment chemicals used for drinking water supply. It enforces laboratory quality assurance, system certification and assesses conformity to standards. It also promotes service products at international, national and regional levels, provided for by the Standards Organisation of Nigeria Act\textsuperscript{5}.

2.4.5 National Water Resources Institute (NWRI)
NWRI is the only institute in Nigeria that conducts training of drinking water utilities, personnel development and implementation of water safety plan under the supervision of FMWR and governed by the National Water Resources Institute Act\textsuperscript{6}. It was created in 1979, located in Kaduna and entrusted with personnel training, researching, documentation and database management (UNDP, 1987). However, the major criticism against the institution is that its capacity for training of personnel is not fully utilised (UNDP, 1987).

2.4.6 Urban Water Board
It has the responsibility of providing potable water to urban and semi-urban areas of the states in Nigeria. It implements policies under the direction of the State Ministry of Water Resources. Key issues against the institution are on payment of water tariff, metering, levels of water affordability, inadequate financing, legal considerations about private sector water provision services, pollution challenges by urban development and the disposal of human and water wastes (World Bank, 2000).

\textsuperscript{5} Section 5.
\textsuperscript{6} 1985
2.4.7 Rural Water and Sanitation Agency (RUWASA)

RUWASA provides potable water for rural communities, directed by the Urban Water Board (World Bank, 2000). However, criticisms have trailed the institution, based on uncoordinated and conflicting programs, which do not conform to the national water policies, but are foisted on rural communities. The communities are alleged to have been inundated with non-functional infrastructure (World Bank, 2000). The government has, however, responded that majority of successful rural water programs are based on community responsibility initiatives (World Bank, 2000). This relies on the principle that, communities should choose most convenient water services they can easily pay for and be responsible for full maintenance. Thus, although these principles are provided in the National Water Supply and Sanitation Policy (2000), they are merely observed rhetorically as the community water provision status remains the same (World Bank, 2000).

2.5 CHAPTER SUMMARY

The chapter discussed the various sources of potable water supply in Nigeria. The predominant challenges of scarcity and pollution of water resource were identified as major indicators of management problems. These challenges were presented as indicating the state of water resources and the management by identified institutions. While the chapter took cognizance of the effect of water scarcity on major sectors of public development, it also gave considerable attention to population explosion, increased urbanisation, industrialisation and climate change, which were implicated for scarcity, while oil spill was identified as primarily responsible for pollution of water resources with attendant effects. The chapter’s discussion of institutional management of potable water has set the foundation for a critique on Nigeria’s environmental legal framework, which empowers the institutions in subsequent chapter.
CHAPTER 3: IMPLEMENTATION OF THE LEGAL FRAMEWORK FOR POTABLE WATER SUPPLY IN NIGERIA

3.0 INTRODUCTION

The second objective is to review the literature on the implementation of the current legal framework for water provision in Nigeria and reflect this on the concept of sustainable development. The chapter examines the implications of legal dualism in the protection of potable water. It reviews the legal instruments for potable water management and examines the import of public trust doctrine and the role of Judges and government in the application of the legal framework supporting potable water supply. Water policies are contextualised, the extent of enforceability and compliance to the legal framework is identified and the challenges in the water sector are discussed in the chapter. By providing arguments for the impact of potable water policy evaluation, there is confirmation of the recognition of sustainable development as fulcrum for policy development. The concept is identified as being in nexus with the theory of participation, relevant for an effective supply of potable water.

3.1 LEGAL DUALISM: IMPLICATIONS IN NIGERIA ENVIRONMENTAL PROTECTION OF WATER

It is globally accepted that every society has legal frameworks and principles of law developed by them (Azoro, 2014). Nigeria is no exception to this practice because, the Nigeria legal system permits various laws to regulate social relations in the country. The country subscribes to the application of international laws and principles by virtue of Constitution of the Federal Republic
Implementation of the legal framework for potable water supply in Nigeria

of Nigeria 1999 provision\(^7\), in which an international law is domesticated, prior to its application in Court proceedings.

Based on its colonial history, the Nigeria legal system is made up of English Laws, consisting of the Common Laws of England, Doctrines of Equity, some Statutes and Orders in Council, applicable in England on the date of reception. These include the Received Laws modified by local legislation, after independence was granted on October 1\(^{st}\) 1960. The English Law also recognises the application of Nigeria Customary Laws, provided by the High Court Laws of Bendel State\(^8\) that:

> "The High Court shall observe and enforce the observance of every Customary Law, which is applicable and not repugnant to natural justice, equity and good conscience, nor incompatible either directly or by implication with any written law for the time being in force and nothing in this law shall deprive any person of the benefit of any such Customary Law".

Customary Law is applicable to Nigerian parties and in causes and matter between Nigerians and non-Nigerians, where it appears to the Court that substantial injustice would be done to either parties, by strictly adhering to any rule of law, which would otherwise be applicable\(^9\). In furtherance of the applicability of Customary Law, the High Court Laws provide that no person shall be entitled to claim the benefit of any Customary Law, where it appears that, either from the express contract or from the nature of transactions, out of which any suit or question may have arisen, that such transactions should be exclusively regulated otherwise, than by Customary Law or that such transactions are unknown to Customary Law\(^10\).

\(^7\) Section 12
\(^8\) CAP 65 1990 Laws of the defunct Bendel State, applicable to Delta and Edo States, Section 13
\(^9\) Ibid, Section 13 (2)
\(^10\) Ibid, Section 13 (3)
Sometimes, Customary Law application conflicts with the English Law doctrines, arising from choice of law problem (Tonwe and Edu, 2007). Thus, in *Sunday Obasohan v Thomas Omorodion & Anor*¹¹, a local enactment expressly preserves the application of Customary Law rules on the subject matter of the enactment. In the suit, the Supreme Court gave judgment that, the Administration of Estates Law and the Property and Conveyancing Law of the defunct Bendel State do not apply to land subject to Customary Law.

Conflict of laws often emerges as a test of judicial sagacity, in which Courts may expressly declare the rules to do justice. Thus, legally, one of the major resolutions has been provided by the High Court Laws in Nigeria, empowering the High Court to observe and enforce the observance of Customary Law in the Court’s area of jurisdiction, based on the application of validity rules identified in Bendel State Customary Court Edit 1984, applicable to Delta and Edo States¹². It provides that:

“Subject to the provisions of this Edict, Customary Court shall administer (a) the appropriate Customary Law...in so far as it is not repugnant to natural justice, equity and good conscience nor incompatible either directly or by necessary implication with any written law for the time being in force”

By implication, customary rules may be enforced at the inferior or superior Courts against any person (Tonwe and Edu, 2007), provided it is harmonious with the validity tests (Emiola, 1997). In essence, the protection of water is not removed from these rules, upon which matters affecting potable water supply may be judicially adjudicated upon in the Court of Laws.

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¹¹ [2001] 7 S. C. (Pt. 1) 154
¹² Section 24 (a); Delta State Customary Courts Edit 1997, Section 24 (a). See also Part IX of the Bendel State Customary Court of Appeal Edit 1984 (as amended) applicable to Delta and Edo State, Section 45 (1)
3.2 LEGAL INSTRUMENTS FOR MANAGING POTABLE WATER RESOURCES IN NIGERIA

Nigeria legal framework consists of the grundnorm, which is the constitution of the Federal Republic of Nigeria, domesticated international laws and enacted Nigeria environmental laws, which include Water Laws, Customary Laws and Policies (Figure 3.1). Nigeria operates a legal system based on plurality and all environmental legal frameworks have levels of governance for international, national, state and local government, in that order. This is the usual global way of structuralizing governance (McGrath, 2010). The following sections discuss the legislative instruments providing for potable water management in Nigeria.

Figure 3.1: Nigeria legal framework for the protection of potable water

3.2.1 The Nigeria Constitution

The 1999 Constitution (CFRN) is the basic law of the land, on which all other laws are founded. It is a reflection of the people’s ethos, which includes their norms and values, belief system and cultural identification. It may, therefore, be referred to as the grundnorm (Kelsen, 1945). The CFRN seeks to protect and improve the multi-sectoral Nigeria environment and safeguard the water, air, land, forest and wild life of Nigeria.\(^\text{13}\)

\(^{13}\) Section 20
The CFRN refers to the supply of potable water in its provision of legislative power for the Federal and State Assemblies for “the regulation of the right of any person or authority to dam up or otherwise interfere with the flow of water from sources in any part of the federation” in the Concurrent Legislative List\textsuperscript{14}. It also provides for the application of International treaties provided they are domesticated\textsuperscript{15}. No express constitutionality exists in the Human Rights for water. However, reference may be made to the Right to life\textsuperscript{16} and the Right to dignity of human person\textsuperscript{17}. Further explanation will be provided on this (Chapter 4.12).

### 3.2.2 International Laws

The Statute of the International Court of Justice\textsuperscript{18} recognises four sources of International Law namely: (1) International Conventions establishing rules expressly recognised by contesting states. (2) International Customs evidenced as general practice accepted as law. (3) The General Principles of Law, recognised by civilised nations. (4) Judicial decisions and teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law (Stephens, 2009a). Out of these four, the two major sources are, Customary International Laws and Treaties.

Customary International Laws consist of principles of international environmental protection, which are both inherently substantive and procedural (Stephens, 2009). A fundamental rule of this law is states’ obligation not to damage or endanger the environment significantly beyond

\textsuperscript{14} Second Schedule, Legislative Powers: Part 11, Concurrent List. Extent of Federal and State Legislative Powers Item 13 (c)

\textsuperscript{15} Section 12 (1).

\textsuperscript{16} Chapter IV Section 33 (1)

\textsuperscript{17} Ibid, Section 34 (1) (a)

\textsuperscript{18} Article 38
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their national jurisdiction. This is evidenced in the “Trail Smelter principle” for cross-border pollution and evidenced in the case of USA v Canada\textsuperscript{19}. The principle is important in the prevention and control of pollution, protection, conservation and rational use of the environment (Simpson and Fagbohun, 1998). Treaty Laws are the most cognisant in environmental protection (including potable water). Notable International Treaties pertaining to water are hereby presented (Appendix 1). International Laws concerning Human Rights, which may be relevant in potable water supply are also presented (Appendix 4).

3.2.3 Nigeria Pre-1988 and Post-1988 Environmental Laws

Nigeria environmental protection laws may be identified from two major dimensions, including contemporary laws. This is important in analysing the scope and focus of the laws (Figure 3.2). Pre-1988 environmental laws fundamentally facilitated natural resources development and exploitation. They addressed localised health problems and welfare, rectified pollution and degradation of the economically yielding natural resources. They were not really environmental protection laws, although there were some provisions incidental to environmental protection and preservation. Reference may be made to such laws (Appendix 2). The Koko toxic and hazardous waste dump (1988), marked the watershed for awakening this era on environmental protection (Ijaiya, 2014). Post-1988 Environmental Laws were more centred on the environment. They are particularly based on the concept of SD, reflecting the paradigm shift from anthropocentricism approach of the pre-1988 laws. Reference may be made to such enacted laws (Appendix 3). Contemporary environmental laws mark a focus on optimum exploitation of natural resources for the purpose of rapid economic development, but, in

disregard for practical conservation and sustainability (Eneh, 2011), despite theoretical propositions in policy documents, such as the National Water Supply and Sanitation Policy\textsuperscript{20}.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{Figure32.png}
\caption{The scope of the period of Nigeria Environmental Laws}
\end{figure}

3.2.4 The Common Law Application and Judges Role in Water Supply Protection

The Common Law is the foremost law relied upon for potable water protection in Nigeria and originated from England (Nwalimu, 2009). Former British colonial nations, apply the rules also. Common Law consists of ‘Judge-made-laws’, developed by Judges in Courts (Atiyah, 1995). The assertion has however, been subjected to controversies and debates by eminent jurists over the years. Reid ‘Lord Reid’ (1972) argued that, “we do not believe in any fairy tales any-more, so we must accept the fact that for better or worse, Judges do make Laws”. Denning ‘Lord Denning’ (1999), in corroboration declared that, “parliament does it too late. It may take years and years before a statute can be passed to amend a bad law. The Judge should make the law correspond with the justice that the case requires” (Zander, 2015) and that, “the Judges do every day make law, though it is almost heresy to say so” (Stephens, 2009). Jeremy Bentham (1748-1832), in agreement, stated that, “it is the Judges that make the Common Law, just as a man makes laws

\textsuperscript{20} 2000
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for his dog. When your dog does anything you want to break him of, you wait till he does it and then beat him. This is the way you make laws for your dog and this is the way Judges make laws for you and me” (Bowring, 1962). In countering the debate, Lord Mackay L. C. (1997) said that, “the duty of the Judge is to apply the law as he finds it, not to seek to rectify perceived inadequacies by the use of creative interpretation. Where there is a gap in the law, our Judges are required to take account of precedent, but where this is unclear, he must decide the best way to proceed and the result may be a decision, which is in some way innovative...but, the fundamental principles were always part of the law” (Russell, 2006). In conclusion of the debate, John Austin (1858) declared that, he could not understand how any person can suppose that society could go on if Judges had not legislated. These arguments are relevant to the subject matter with incontrovertible facts that, the application of Common Law rules is due to Judges’ legal ingenuity.

In Nigeria, there is a constitutional support, that Judges make laws. Thus, the 1999 CFRN provides that, the Chief Judge may make rules for regulating the practice and procedure of the High Court of the State\textsuperscript{21}. This provision has direct implications for Courts’ protection of potable water supply by virtue of Section 20. The Common Law rules are, thus, embedded in the legal framework of Nigeria and regarded as the bedrock of the Nigeria Legal System, although it is now largely over-taken by legislations.

The Court is acknowledged as the interpreter of constitutional provisions in Attorney-General of Bendel State v Attorney-General of the Federation\textsuperscript{22}. In the case, the Attorney General of Bendel

\begin{flushright}
\footnotesize
\textsuperscript{21} Section 274 \\
\textsuperscript{22} [1983] LPELR-SC.108/1982
\end{flushright}
State asked the Supreme Court to declare that Section 2 (1) and (2) of the Allocation of Revenue Act\(^\text{23}\) is unconstitutional, void and that Bendel State was entitled to true and correct statement of all monies paid to the federal account by the federal government. The Supreme Court gave judgment in favour of the defendants for claims 1 and 3 and against them for claims 2. It also held that Court of Laws in Nigeria, are guardians of the constitution and shall always rise to their feet to declare any purported infraction of the constitution, null and void. Thus, on issues of water protection, Judges may refer to constitutional provisions in arriving at decisions when there are litigations.

In the traditional focus of environmental protection, the fundamental cause of action at Common Law that has relevance to water supply is the Law of Torts, which is mainly prescriptive of the control of environmental pollution. Tort as a civil wrong entitles an injured party to seek claims to damages for a loss or seek injunction for discontinuance or prevention of a wrongful act. Litigation, may thus, be anchored on the Tort of negligence, nuisance, trespass or strict liability \(\text{(the rule in Rylands v Fletcher)}\)^\(^\text{24}\). However, Tort of nuisance is mostly applied for environmental protection and may be invoked when noxious emission from a defendant’s premises bears significant impairment on the use and enjoyment of Plaintiff’s property or prejudicially affects Plaintiff’s health, comfort or convenience (Rogers, 2010). Thus, nuisance is regarded as pollution or inconvenience occasioned by wrongful interference with ordinary physical comfort of human existence (Chaytor and Gray, 2003). Persons affected should be able to establish damage or injury in relation to foreseeability (Rogers, 2010), which imposes a degree of culpability in the sense that tort of nuisance may closely be connected to negligence,

\(^{23}\) 1981
\(^{24}\) [1868] LR 3 HL 330
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which may hold true for private nuisance, but may not be a strict requirement for public nuisance. In Chief P. U. Ejowhomo v Edok-Eter Mandilas Ltd\textsuperscript{25}, evidence indicated that Respondent was unaware of Appellant’s poultry farm in the destruction of bridge, but, they were held liable for damages in the ensuing loss. Supreme Court used causation and not foreseeability. Karibi-Whyte, JSC stated that foreseeability may only be applicable when facts of the case supports test.

Nuisance may be public or private (Rogers, 2010). The Court held in Abiola v Ijeoma\textsuperscript{26} that private nuisance is the unlawful interference with a party’s use and enjoyment of land or some right over or in connection with it. Interference could be intentional or due to carelessness. Thus, Sutherland, JSC declared in the case of Village of Euclid v Ambler Realty Co\textsuperscript{27} that, “nuisance may be merely a right thing in a wrong place like a pig in the parlour instead of the barnyard”.

Legal action may result in recovery for damages to land, health or any other benefit attached to the interests in property (Meiners and Yandle, 1998). It is public nuisance, when the conduct materially affects enjoyment of a right, which members of the public have in common. When the nuisance is an interference with the natural right incidental to ownership, strict liability may be declared as in Cambridge Water Company v Eastern Counties Leather Plc\textsuperscript{28}, which was an English Tort Law establishing the principle that may be made under nuisance in strict liability for water pollution. In the case, Defendant was the owner of a leather tanning business. Small

\textsuperscript{25} [1986] LPELR-SC.205/1985
\textsuperscript{26} [1970] 2 All NLR 286
\textsuperscript{27} [1926] 272 U.S. 365
\textsuperscript{28} [1994] 2 AC 264
amounts of seepages of solvents seeped through the floor of the building into the soil below for a long period of time and coursed into the borehole used for local residents' water supply by Claimant. The contamination was at a level beyond what could be considered safe and Cambridge Water Company ceased using the borehole and brought actions based on negligence, nuisance and the rule in *Rylands v Fletcher*. Appellate Court held that there was no liability in Defendant, as the damage was too remote and not reasonably foreseeable that the spillage could result in the closing of the borehole. Foreseeability of the damage is a requirement of liability in action for nuisance and claims based on the rule in *Rylands v Fletcher*. These general rules are also applicable in Nigeria, where the Common Law is a part of the legal system. A *Locus Classicus* is *Jimoh Lawani and others v The West African Portland Cement Company Ltd*.

Principal distinction between private and public nuisance is that, public nuisance is usually considered as a crime, while private nuisance is always a Tort (Rogers, 2011). In a public nuisance, a person lacks the capacity to sue the tort feasor, unless it is shown that the damage suffered by a person is over and above the one suffered by the public. Rogers (2011) has argued that action by a private person may fail in public nuisance if it is proved that injury was suffered by only the public or some section of it. Formerly, actions based on public nuisance may only be instituted with the Attorney General’s consent. In the case of *Amos & Ords. v Shell BP Petroleum Development Company of Nigeria Ltd*, action was struck out as incompetent because, there was a breach of the rule. This position of the law has however, undergone mitigation, with the decision in *Adediran v Interland Transport Ltd*. Karibi Whyte, JSC (1977) declared that “It is well...

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29 [1868] LR 3 HL 330  
30 [1971] Abeokuta High Court Suit No. AB/82/71  
31 [1974] 4 ECCLR 436, 35  
32 [1991] 9 NWLR (Pt. 214) 155
settled that a nuisance, whether public or private is an injury, which confers on the person affected a right of action...The individual who suffers injury has a right of action because of the cause of action”.

A corresponding enactment with the Common Law provision on public nuisance is the Nigeria Criminal Code Act\textsuperscript{33} applied in the case of \textit{Esso Petroleum v Southport Corp}\textsuperscript{34}. The provision may be invoked to punish for the offence of unlawful discharge of oil pollutants on water. There is also criminal liability for fouling of water (which may be a spring, well, tank, stream or reservoir), which renders a place less fit for the purpose, for which it is ordinarily used for\textsuperscript{35}. This provision includes land.

Under the Common Law doctrine of riparian rights, landowners with property adjoining a body of water such as a river, lake, stream, pond or any other watercourse are vested legally with right to a reasonable use of the water flowing through or over their property (Okonkwo, 2010). Landowners of such property cannot sell or transfer the rights, unless, with the adjoining land and, in reasonable quantities with regard to the land (Okonkwo, 2010). The rights of access vest an unrestricted right on an upstream riparian owner, to use the water for day to day sundry domestic purposes, such as drinking, washing, irrigation and watering of livestock. However, if the water becomes exhausted in the course of usage, the downstream riparian owner has no cause to institute action for damages (Okonkwo, 2011). Conversely, while a riparian owner is vested with the rights to use the water for extraordinary purposes, such as industrial usage, the person is bound to substantially restore the water, undiminished in quantity after usage. In

\textsuperscript{33} 1990 (Cap C38 LFN), Section 234
\textsuperscript{34} [1956] AC 218 (HL) 192
\textsuperscript{35} Ibid, note 33, Section 245
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Davey Compressor Co. v City of Delray Beach\textsuperscript{36}, a 1994 Common Law case in Florida, United States of America, the Supreme Court held that a firm, which damaged an underground water supply by neglecting to dispose toxic wastes appropriately was responsible for the cost of restoring the groundwater, to make it fit for human consumption.

3.2.4.1 Application of Common Law Public Trust Doctrine

Common Law jurisprudence identifies the context of Public Trust Doctrine, as the vesting of a legal title in the state, while the equitable title reposes in the public. The state is vested with the trusteeship of natural resources management (such as land and water), for public interest (Bento, 2015). There is, thus, a suggestion that certain resources are (notably, water supply) commonly shared property of all citizens, stewarded in perpetuity by the state (Blumm, 1989). Public Trust is therefore, applicable to land use and accessibility (Huffman, 2003), imposing and reflecting a value system. This stimulates scholars’ examination of people’s rights to access and enjoy the multifarious natural resources (Takacs, 2008).

Documentations of the historical antecedent of Public Trust shows that Justinian, the Roman Emperor was credited with simplification of governing laws in his empire (Watkin, 1999). More than 1,500 years ago, Justinian assembled leading jurists to codify their wisdom in the ‘Corpus Juris Civilis’ (Watkin, 1999). Justinian later added to the code by declaring that:

“\textit{By the law of nature, these things are common to all mankind- the air, running water, the sea and consequently, the shores of the seas}”.

Scholars labelled the codification as, the ‘Public Trust Doctrine’ (Corpus Juris Civilis) (Takacs, 2008). The ‘Corpus Juris Civilis’ was discovered in Pisa and analysed by scholars. Its ingress and coding into European Civil and Common Law nations subsequently followed (Deveney, 1976),

\textsuperscript{36} [1993] 613 So.2d 60 (Flo. 4th DCA)
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designated as the ‘Magna Carta’ (1215), 800 years ago (Turner, 2003). In England, King John (1199-1216) in support, revoked his associates’ exclusive fishing and hunting rights for reaching the public rights doctrine to access the common resources (free navigation was enabled by the removal of fishing weirs that obstructed). The King exercised vested ownership of the resources, held in trusteeship (Takacs, 2008) and the Common Law was enriched.

In the United Kingdom, the Doctrine of Public Trust has an inter-twining between the Crown and the Parliament. The sovereign could not alienate crown lands (like it used to do). It was regarded as a direct restriction of the King and not the government per se (Sax, 1992). Public Trust Doctrine also emerged in the Common Law of American jurisprudence in 1821. However, it did not affect dry lands (Sax, 1970). The Court proceedings of a New Jersey case, Arnold v Mundy37 is instructive on the import of Public Trust Doctrine with global application. The Court held that-

“Government would not consistently, with the principles of the law of nature and the constitution of a well ordered society, make a direct and absolute grant of the waters of the state, divesting all the citizens of their common right”.

The case of Illinois Central Railroad v Illinois38 also carries similar import.

3.2.4.2 Implications of Common Law Public Trust Doctrine in Nigeria

These decisions may have impacted considerably on Nigeria jurisprudence and Public Trust Doctrine may be examined from different facets, in which it reflected. This is because, it may mean different things to different ideologies, in which diverse models have been proposed. For example, in Nigeria, there is constitutionality in the application of the doctrine. The starting point is the declaration that:

37 [1821] 6 N. J. L. 1. N. J. Lexis 2
38 [1892] 146 US 387
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“The State shall protect and improve the environment and safeguard the water, air and land, forest and wildlife of Nigeria”39.

The declaration is express in the imposition of public trust duties on government to protect natural resources, considered beneficial to communities. Thus, the exploitation of human and natural resources in any form, for reasons other than the good of the community would be prevented40.

The Constitution of the Federal Republic of Nigeria 1999 provisions of the Fundamental Objectives and Directive Principles of State Policy41, is regarded as public trust. With regard to potable water supply, the doctrine is most visible in the implication of the right to healthy and clean living as a duty, reposed on the provision of potable water resources, as an ingredient for sustainable life. This may be interpreted as government’s duty for water provision, but the government alone cannot be liable for this. The provision of potable water carries with it several implications, in which the power of lobby, politics and democratisation embody the import of sustainability (Winpenny, 1997; Sultana and Loftus, 2012). Thus, the community members, in recognising the gravity of public trust, should embrace certain collaborating principles, considered necessary for government’s effective performance of water provision. However, in actualising constitutionally imposed duty performance, government should provide public assistance in deserving cases or in other conditions of need42.

39 Section 20
40 Ibid, Section 17 (2d)
41 Ibid, Section 3 (1)
42 Ibid, Section 17 (g)
Implementation of the legal framework for potable water supply in Nigeria

The Nigeria Land Use Act\textsuperscript{43} (LUA) is a notable law embodying the Public Trust Doctrine and regarded as a part of Nigeria constitution and not just a law. The assertion has been controverted by writers, but corroborated in the case of \textit{Chief Nkwocha v Governor of Anambra State and others}\textsuperscript{44}. The Supreme Court settled the controversies attending the status of the LUA, by holding that, the Act is not a mere existing law, but a part of the Constitution.

Since the advent of the LUA, Nigeria land ownership structure has been radically transformed. Flexibility, as one of the characteristics of Customary Law, was a major reason for the LUA enactment (Oludayo, 2004). This was because, identified diversity in customary land tenure created difficulty in applying different customs of the people. Thus, under the Act, a dichotomy was created for the statutory rights of occupancy, related to the urban areas, to be granted by the state governor (Oludayo, 2004). The local government grants the customary right of occupancy for lands in rural communities (Okonkwo, 2010). The LUA prohibits alienation by assignment, mortgage, transfer, possession or sub-lease of customary right of occupancy, without the governor’s due consent\textsuperscript{45} or the local government Chairman\textsuperscript{46}, who may grant customary rights of occupancy for farming purposes of not more than 500 hectares (This ensures that land is not banked but, productively used). Nigerians therefore, are only enjoying the rights of statutory occupancy (Uchendu, 1979). Thus, the LUA, as legal evidence of Public Trust Doctrine, enables equitability in land distribution as a natural resource, providing opportunities for investors, private individuals, communities and corporate organisations.

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\textsuperscript{43} 1978
\textsuperscript{44} [1984] LPELR-SC.53/1983; See also \textit{J. M. Aina and Co. Ltd. v Commissioner for Lands and Housing, Oyo State of Nigeria} (1983) \textit{4 N. C. L. R 643} per Kayode, C. J.
\textsuperscript{45} LUA, Section 5 (1)
\textsuperscript{46} Ibid, Section 6 (1)
The LUA and the genesis of its enactment may be analogically referred to the USA. The Public Trust doctrine has generated severe legal arguments and counter-arguments on interpretations and applicability. The arguments are directed at ensuring public property does not recourse to a few powerful hegemony and that it remains within the enabling law’s provision. Thus, in *Lucas v South Carolina Coastal Council*47, the Beachfront Management Act 198848, as a new legislation, affected Lucas’ two plots of land in the protected zone of the Isle of Palms. Lucas argued that the law effected a taking on his property and there should be a compensation. Lucas’ success at the trial court was reversed by the Supreme Court of South Carolina, on the argument that, the Act was enacted to forestall serious harm and could not be said to constitute a compensable taking, notwithstanding the effect on the value of the property (Sax, 1992). The crux of the matter at the Supreme Court, was whether, the complete removal of value by a legislative provision constituted a compensable taking. Thus, a notable rule for cases with complete deprivation of a property’s economic value was formulated in the case of Lucas. The Court held that a compensation is required, when a legislation deprives the owner of a real property, the total economic values- unless the property development violated any restrictions, which the principles of the state’s law of property and nuisance had placed on the ownership of land.

**3.2.4.3 Implications of Public Trust in the LUA 1978 on Potable Water Supply**

The provisions of the LUA, notwithstanding, it is difficult for the rural community members to see a disconnection between their traditional ownership rights to land/water and the government’s trusteeship rights. Claims are still laid to lands with water, such as rivers, streams, ponds and lakes. The merits of the provisions of the LUA notwithstanding, the inherent opinion of traditional ownership of land has not fully abated, particularly in rural communities of Nigeria.

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47 [1992] 505 U. S. 1003  
48 (S. C. CODE ANN).
The result is that, the politics of water often takes the centre-page, cumulating in inter/intra community feuds and family conflicts.

3.2.4.4 Jurisdiction of Courts for Public Trust in Nigeria

Matters pertaining to Public Trust Doctrine may be adjudicated by the High Court, which has original jurisdiction for issues on Fundamental Human Rights, provided for in the Constitution of the Federal Republic of Nigeria 1999\textsuperscript{49}, while the Chief Judge of the State reserves the power to make rules for the matter\textsuperscript{50}. The LUA provides that the High Court reserves the original jurisdiction in respect of land proceedings, pertaining to the granting of land or issuance of certificate of occupancy. However, where the matter pertains to a customary right of occupancy, an Area Court or Customary Court has the original jurisdiction\textsuperscript{51}.

3.2.5 Nigeria State Laws

All 36 States in Nigeria are also guided by Environmental State Laws enacted by various Houses of Assembly. An example is the Delta State Waste Management Board Law (2004). The 774 Local Governments are nominally responsible for rural potable water supply, but very few have the resources to facilitate this or have rural water supply division (Gandy, 2006).

3.2.6 Nigeria Customary Law

Customary Law is one of the sources of the Nigeria legal system (Ikpang, 2013) and a part of the legal framework supporting environmental protection (Atsegbua et al., 2003). It, therefore, has a major impact on the sustainability of potable water in Nigeria. Customary Law embodies the

\textsuperscript{49} Section 46 (1)
\textsuperscript{50} Ibid. Section 46 (3)
\textsuperscript{51} Ibid. Section 41
rules of conduct, which people living within a locality have come to accept as governing their legal relationships, established by custom and usage and provided for in the Customary Court of Appeal Laws\textsuperscript{52}. It is not static- therefore, it is organic in the regulation of the people and their transactions (Kolajo, 2000).

The Court declared in \textit{Bakare Alfa & Ords v J. Arepo}\textsuperscript{53} that, Customary Law may also depict the ancient rules of law binding on a particular community. Thus, despite the antiquated origin and flexibility, the Courts are bound to rely on existing traditional laws and not the ancient traditional practices, rendered obsolete and unenforceable. Customary Laws are, therefore, susceptible to changes emerging from rapid socio-economic developments (Kolajo, 2000). The Court explained what Customary Law means in the case of \textit{Oyewumi v Ogunesan}\textsuperscript{54}, in which the validity of Customary Law as a source of Nigerian Law was explicitly declared. The Court, per Obaseki, JSC held that Customary Law is-

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The organic or living law in Nigeria, regulating their lives and transactions. It is organic in that it is non-static. It is regulatory in that, it controls the lives and transaction of the community subject to it. It is said that custom is a mirror of the culture of the people. I would say Customary Law goes further to impact justice to lives of those subject to it”.
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Customary Law and the large bodies of water (such as lakes, ponds, streams, dams, wells or bore-holes) provide ready source for customary water use in Nigeria. Thus, importance is attached to water, relevant for domestic usage, fishing, farming and irrigation, livestock raising and religious propitiation and, no customary restrictions are attached to access in large receptacles, such as river (Elias, 1956). Customary rights to water is based on customary rules governing possession of land, in which land is common property of the tribe, presided over by the head chief, vested with right to hold land in trust and apportionment (Emiola, 1997). In most

\begin{thebibliography}{9}
\bibitem{52} Section 2
\bibitem{53} [1963] WNLR 95
\bibitem{54} [1990] 3 N. W. L. R. (Pt. 137) 182 at p. 207
\end{thebibliography}
Nigerian communities, a well or stream running through or close to the village is common property, but if it is clearly outside its boundary, it is deemed as belonging to the person through whose farmland it runs (Ajisafe, 1906).

3.2.6.1 Enforceability and Compliance in Customary Laws on Potable Water Supply

One method of seeking redress over water infringements is by judicial proceedings, instituted to determine disputes over customary rights to water at the Customary Courts, set up statutorily by the 1999 Constitution for the Federal Republic of Nigeria55. The Land Use Act 197856 also provides Customary Courts, the jurisdiction to adjudicate on proceedings of customary rights of occupancy, defined to include the right of a person or community, lawfully occupying or using land in accordance with Customary Law.

Another method is by the non-statutory adjudicative system, wherein chiefs and elders arbitrate over customary water matters, based on whether it is a centralised ethnic grouping or not. In the former, the adjudicating system is elaborate as a result of community constituent units, bound together by common interests and loyalty to their political head or head chief (Fortes and Pritchard, 1940; Emiola, 1997). No single authority is in existence. The judicial system is largely dependent on authority of elders of a lineage anchored on seniority in the groupings (Fortes and Pritchard, 1940). Principal witnesses are called to enter evidence in proceedings, after which, the chief or elders give verdicts (Elias, 1956), which are usually swift, equitable and devoid of injustice (Emiola, 1997). Enforceability of verdicts is carried out by pressure from family members, age grade groups or cohorts, in view of the consequences of non-compliance or breach, which has possibility of rebounding on close associates. Fine items for propitiation

55 Section 282
56 Section 41
may be ordered (Elias, 1956), while obdurate erring members may be banished or go into voluntary exile to avoid shame of the offence or, the perception that the offender is the precursor of evil-luck (Elias, 1956). The practice of ostracising an erring member for severe breach is firmly rooted and may indicate voice ostracism or trade ostracism, in which members are instructed to alienate an offender from speech communication or trade inter-action.

Customary management and control of potable water calls attention to proven collectiveness in adjudication. Thus, participation, as the study focus, cannot be regarded as alien to the rural community members. It answers for the call on stakeholders’ inclusion, whether as state or non-state actors and may be modelled upon as likelihood of a unifying factor for a successful potable water management.

3.2.6.2 Judges Role in Application of Customary Laws to Potable Water Matters

Evidence in Courts is a critical aspect of adjudication by Judges. Thus, a custom may be adopted as part of the laws governing a particular set of circumstances, if it can be judicially noticed or can be proved to exist by evidence, which the Evidence Act\textsuperscript{57} has provided for. However, the burden of proving a custom lies upon the person alleging its existence\textsuperscript{58}. Apart from these provisions, a Judge is guided by the distinction accorded the rule of validity in Customary Law, which is one of the paramount issues examined by Courts, since it must have acceptability by the people, whose affairs it seeks to regulate. This may be especially discernible in customary land tenure system adjudicated upon in \textit{Owoniyi v Omotosho}\textsuperscript{59}. In seeking to elucidate this, the Supreme Court, per Bairamian, F. J. defined Customary Law as a mirror of accepted usage.

\textsuperscript{57} 2011 (As amended), Section 16 (1)
\textsuperscript{58} Ibid, Section 16 (2)
\textsuperscript{59} \textit{[1961] 1 All N. L. R. 304}
The Courts, in recognising the changes inherent in Customary Law, may still seek clarity on the validity. This arises from its flexibility, since it may change from place to place, developing and adapting in conformity with socio-political and historical conditions of the society or community it seeks to regulate (Kolajo, 2000). It is judicially noticed by Courts, that Customary Law consists of coercive sanctions that may vary from censure, fines, ostracism or expulsion from age group or trade group, against those who breach the customary rules (Elias, 1956). However, in the application of these sanction methods, the Court is guided by the three rules of repugnancy, incompatibility and public policy (Tonwe and Edu, 2007). These may be regarded as limitations to the application of Customary Law in the adjudication on potable water litigations. Badaiki (1997) argued that the genesis of these rules may be traced to the provision of the Supreme Court Ordinance 187860 that:

“Nothing in this Ordinance shall deprive the Supreme Court of the right to observe and enforce the observance or shall deprive any person of the benefit of any law or custom existing in the said Colony and Territories, subject to its jurisdiction. Such law or custom not being repugnant to natural justice, equity and good conscience, nor incompatible either directly or by necessary implication, with any enactment of the Colonial Legislature existing at the commencement of this Ordinance, or which may afterwards come into operation.

The following paragraphs will attempt to examine the implications of these three ingredients:

**Repugnancy:** Where a rule of Customary Law is repugnant to natural justice, equity and good conscience, it is by the fact itself, void. The rule was first applied in the case of *Eshugbayi Eleko v Officer Administering the Government of Nigeria*61. Lord Atkin held that, “the Court cannot itself transform a barbarous custom into a milder one. If it stands in its barbarous character, it must be rejected as repugnant to natural justice, equity and good conscience”. Lord Wright, in

60 Of the Colony of Lagos
61 [1931] A. C. 662
support, declared in *Laoye v Oyetunde*⁶² that the repugnancy rule was intended to declare barbarous customs void. The rule was equally applied by the Court in the more recent case of *Mojekwu v Iwuchukwu*.⁶³

**Incompatibility:** Customary Law rule must not be incompatible either directly or by implication with any law for the time being in force. The Court invoked the rule in *Timothy Tanloju Adesubokan v Razaki Yinusa*.⁶⁴ Incompatibility of laws points to the invalidity caused by the conflict of a local law and a rule of Customary Law. Impliedly, it is a reference to when a customary rule is invalidated although, there is nothing in a relevant law or enactment, expressly conflicting with it. However, the Court acts under the conviction that the effects of each laws show inconsistency in that, they cannot reasonably co-exist. Thus, in the acceptance of one, the other is rejected. The one to be rejected is therefore, the rule of native law and custom. Notably, ‘any law for the time being in force’ does not refer to English Law or the Received English Law, which if it does, is capable of invalidating Customary Law, since it is usually inconsistent with English Law (Tonwe and Edu, 2007).

**Contrary to Public Policy:** By the provision of the Evidence Act 2011⁶⁵, Courts will not enforce a Customary Law that is contrary to public policy. However, it may be a difficult task for Court to define situations that may be declared as ‘contrary to public policy’ (Tonwe and Edu, 2007). The Court in adopting objectivity, should therefore, avoid subjectivity. The reason for this is credited to Burrough, J. in *Richardson v Mellish*⁶⁶ that, public policy “is a very unruly horse, which when

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⁶² [1944] A. C. 170 at 172-173  
⁶⁵ Section 18 (3)  
⁶⁶ [1824] 2 Bing 229, 252
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"once you get astride it, you never know where it will carry you". Kolajo (2000) has however, attempted to pinpoint what contrariness to public policy may portend by his argument, which relied on Court’s statement in *Cole v Akinyele*\(^{67}\) that, any custom permitting immorality is not in tandem with public policy and good conscience and is thus, repugnant to natural justice, equity and good conscience.

In adjudicating over a suit under the Customary Law, Judges are mindful of the currency of the law relied upon by litigants. This fact was given relevance in the *Locus Classicus, Lewis v Bankole*\(^{68}\). Speed, J. declared that, the application of a customary rule of law must be in existence at the relevant time, when it is sought to be enforced and be recognised by the community. It is important that the Court should, however, exercise caution in abiding by the rule of currency of customary law. This assertion was given credence by a learned jurist, who noted that, the mere fact that a particular custom is no more in vogue in other technologically advanced parts of the world or that it is inconsistent with any aspect of the Common Law, should not be the determining factors as to whether or not a particular custom is legally valid (Olubor, 2002).

### 3.2.6.3 Litigations in Potable Water Supply: Legal Remedies and Limitations in Customary Law

An aggrieved rural community member has a right to seek justice in Court, where he may access fair hearing, which has been constitutionally provided for in the 1999 Constitution\(^{69}\). A community member may also exercise a right of appeal against the decision of Court. However,

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\(^{67}\) [1960] *SCNLR* 192  
\(^{68}\) [1908] *1 NLR* 81 at 100; *Ogboi v Okogbue* [1991] *7 NWLR* (pt. 204) 391  
\(^{69}\) Section 36 (1)
where the decision of the Customary Court is based on law rather than custom, litigant’s appeal to Customary Court of Appeal or Court of Appeal may fail and be dismissed. Thus, competency of questions of appeal should be founded on issues for Customary Law. This issue emerged in Afor Akobi v Chukwuka Osadebe. The Court of Appeal stated that the right to appeal against the Customary Court of Appeal decision can only be valid if the decision determines questions of Customary Law, when the decision of the Customary Court of Appeal is in a civil proceeding and where the appeal raises questions of Customary Law. Thus, there should be a co-existence of the stipulated conditionality. These conditions may be regarded as indicating a mis-carriage of justice, which contradicts the dictum of *ubi jus ibi remedium* (where there is a right, there is a remedy).

An aggrieved person may seek for fresh action at the High Court, seeking for a setting aside of Customary Law decision, where the litigant is able to establish that the proceeding was a nullity. However, problems may arise in declaratory relief as remedial procedure. In Chief Abubakar Zibiri Odugbo v Chief Aliu Abu & ors, the Court held that “a declaration as right already determined by inferior Court does not correct the error if any of the tribunal but leaves it as it is. It declares what the Court regards as the true position. Thus, the inferior Court’s wrong decision and the declaration remain to create inconsistent findings”. In David v Zabia, Edo, JCA, held that “in the same vein, if a party to a case before a Customary Court of Appeal can make out a case for nullity by reason of that Court deciding a case outside its jurisdiction and an appeal to its decision is not cognizable before the Court of Appeal, that decision can be validly challenged by an act of the High Court”. On dis-satisfaction with Customary Court’s decision, a

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70 [2014] LPELR-22655 (CA)
71 [2001] 7 LAW/SC 112/96
72 [1998] 7 NWLR (pt. 556) 105 at 114
litigant may apply to the High Court for judicial review through a certiorari or by instituting a fresh action at the High Court, praying for a declaration of nullity.

### 3.3 GOVERNMENT ROLE IN THE APPLICATION OF LAWS AND REGULATIONS FOR POTABLE WATER

The provision of the Constitution for the Federal Republic of Nigeria\(^{73}\) is the driving force behind government’s environmental protection. Pursuant to the provision, government, periodically accents to enactments for environmental protection. A typical example is the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act\(^{74}\). It is the foremost law, directing environmental protection and the government’s aspiration to provide effective enforcement of environmental laws and standards. The Act provides that the Minister for Environment has been empowered to make regulations in carrying out the agency’s functions\(^{75}\). This has resulted in the enactment of twenty-four regulations. The Act also provides for the enforcement of guidelines and legislations on sustainable management of the ecosystem, biodiversity conservation and the development of natural resources in Nigeria\(^{76}\).

Formulation of policies for water resource management is another way, in which the government of Nigeria makes input into the sector. Foremost examples are the National Water Supply and Sanitation Policy (2000), NEEDS (2003-2007) and Presidential Water Initiatives (2007). These policies will be further discussed (Chapters 3.4.1, 3.4.2 and 3.4.3).

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\(^{73}\) Section 20
\(^{74}\) 2007
\(^{75}\) Ibid. Section 34
\(^{76}\) Ibid. Section 7 (e)
3.4 CONTEXTUALIZING POLICY FOR MANAGING POTABLE WATER SUPPLY

Apart from laws and regulations, another major aspect of Nigeria environmental legal framework for potable water protection is, policy, consisting of principles guiding the government. Policies are the high level overall plan embracing the general goals and acceptable procedures, especially of governmental body (Merriam-Webster, 2013). They may emerge from legislations or decisions made by elected community members or by ministries, headed by a minister and communicated through several instruments, such as policy documents or laws. Legal theory takes a lead on further illumination of what policies are, by placing great premium on standards, consisting of policies and principles (Dworking, 1986). Policies may, therefore, be regarded as standards identifying a goal to be achieved and intended for the socio-political and economic improvements in a community’s environment (Dworking, 1986). Based on these definitions, it is relevant to test or evaluate a policy by inquiring whether it advances the general goal (Zaelke et al., 2005) and not whether individuals are given something that they are entitled to get (Dworking, 1986).

Policies should comply with existing laws and the Nigeria water protection policies take their authority from the CFRN provisions (Figure 2.4). The implication is that, even when there is a discerned lacuna, policy implementers become handicapped in the execution of projects. Some policies have been deliberately formulated by the federal government, to protect and manage potable water supply. Notable ones are presented in the following sections.

3.4.1 National Water Supply and Sanitation Policy

The Federal Government of Nigeria launched the National Water Supply and Sanitation Policy, which provides for the right of Nigerians to potable water supply (World Bank, 2000). The policy...
vests the provision of water on the three tiers of government—namely, the federal, state and local government (World Bank, 2000). The policy recognises water as economic goods and encourages that it should be managed as a business (World Bank, 2000). While the policy supports reforms, private sector participatory initiatives and the special needs of women and the poor are given recognition. The policy provides that the poor should be provided with free water supply, while also promoting targets for coverage of water supply (National Water Supply and Sanitation Policy, 2000).

3.4.2 National Economic Empowerment and Development Strategy (NEEDS)

NEEDS (2003-2007) recognises that a healthy environment is vital for good health, while water supply and sanitation are relevant for the improvements of human development (such as, education, health, urban and rural development, economic and industrial development), which are necessary for poverty alleviation (WaterAid, 2005).

3.4.3 Presidential Water Initiative (PWI)

PWI was launched to increase access to potable water supply and sanitation services in Nigeria. Access to water supply was projected for 100% citizens at the state capitals, 75% at the urban and peri-urban areas and 66% at the rural communities. It is doubtful whether the projection has been realised. Answer to a relevant question on whether the legal framework provisions are enforced and complied with is provided in the following section.
3.5 ENFORCEABILITY AND COMPLIANCE TO THE LEGAL FRAMEWORK FOR POTABLE WATER SUPPLY

The Nigeria legal framework for potable water supply has been criticised for poor compliance and weak enforcement (Eneh, 2011). This may be attributed to faulty draughtsmanship and lack of foreseeability. Example may be cited from the NESREA Act, which was enacted to ameliorate controversial environmental issues. However, the Law itself contains inherent lacuna. The Act directs the Agency to enforce compliance with policies, standards, legislations and guidelines on water quality, environmental health and sanitation, including pollution abatement. The implication is that, the law is preventive and not remedial. Thus, ‘polluter pays’ principle is not expressly provided. This may result in legal hurdles, capable of hindering justice and Courts’ enforcement of remedies for breach of water resources protection. The NESREA Agency is precluded from taking action on matters concerning oil and gas and empowered statutorily. Thus, the Agency’s action may be hindered, when gas flares or oil spillages cause pollution of potable water resources (Ladan, 2013). This challenge may result in socio-economic deprivation, in which communities engage in armed conflicts with oil exploring companies, mostly in the Niger Delta region. The NESREA Act has also contradicted itself by the inclusion of oil and gas in the list of International treaties that NESREA Agency should enforce.

The Water Resources Act 1993 provides for enforcement. One of its powers is imposition of fees, rates and charges for potable water supply. The provision has elicited controversies from water users, whose compliance may be doubted, while polluters of water resources are hardly
Implementation of the legal framework for potable water supply in Nigeria
censored for polluting activities (Okonkwo, 2010). It may therefore, be argued that, the policies
drafted for the management of potable water supply are decidedly complex, conflicting in
directives and lack coherence (Ogbodo, 2010). The National Water Supply and Sanitation Policy
(2000) is well articulated. However, Human Rights to Water hangs in the balance, due to
unconstitutionality, while the concept of participation, enunciated by SD has not been effected
pragmatically. Targets for water supply coverage in the PWI (2003) provision has not been met,
due to inconsistencies in service provision and conflicts in actions from the agencies and the
government (World Bank, 2000). Thus, most rural communities still depend on surface water or
privately dug boreholes and dug wells for potable water supply (USAID, 2006). The success of
NEEDS in poverty reduction has been questioned, as issues which the policy addressed as
reformative are still pending. For example, infrastructural development of all sectors of human
development, including the provision of potable water (Ikeanyibe, 2009).

Participation is not a commonly practiced feature in the legal framework for potable water
supply. However, the Nigeria Customary Law deviates from this observation because, the
tradition of participation and collaboration are major attributes of the local tradition, inherently
imbued with enforceability and compliance as relevant aspects of the local ethos.

3.6 CHALLENGES IN POTABLE WATER POLICY IMPLEMENTATIONS IN NIGERIA

Water policies serve as guidelines for programs, but they are inundated with general and
inherent problems (Table 3.1), which may render them in-effective in Nigeria.
3.6.1 Impact of Policy Evaluation on Potable Water Management

The probable resolution of the challenges in potable water policy programs lies in pragmatic policy evaluation, among other important actions that could be taken. This is because, all over the world, there is a significant increase in the awareness of advantages accruing from the evaluation of policies, which Crabbe and Leroy (2008) declared as “the scientific analysis of a certain policy area assessed for certain criteria and on the basis of which, recommendations are formulated”. Policies are traditionally distinguished for evaluation as ‘ex-ante’ evaluation, which refers to policy evaluation prior to implementation, when it is still on the drawing board. It could also be ‘ex-post’ evaluation of policy after completion of development and if it has been implemented. Evaluation could be ‘ex-nunc’ evaluation of current policy, having the likelihood of modification, which is the one usually employed (Crabbe and Leroy, 2008). This is because, there is hardly any evaluation before and after a policy is implemented in Nigeria (Orubu, 2006). However, evaluation of policies is relevant to the effective implementation of water policies (Table 3.2). Lack of evaluation may be considered the most damaging against policy formulation (Bouveyron et al., 2010; GWP, 2015) and discussed in the following section.

Most policies are based upon certain principles, addressing the evaluation of stated policy goals. Thus, policy-makers and executors may reflect on the best principles to use that may ensure successful implementation. In this regard, international conventions have given precedents to the world in effective environmental protection, exemplified by the United Nations Conference on Environment and Development (UNCED) (1992). A key concept in this direction is SD, which most nations have adopted as a basic philosophical hub, from which the protection of the ecosystem is emerging. Nigeria has adopted it by domestication and the chapter examines its import (Chapter 3.8).
Table 3.1: General and inherent problems in potable water policy implementation in Nigeria

<table>
<thead>
<tr>
<th>GENERAL AND INHERENT PROBLEMS IN POTABLE WATER POLICY IMPLEMENTATION IN NIGERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most times, there may not be clarity in project planning, implementation and evaluation (GWP, 2015)</td>
</tr>
<tr>
<td>More emphasis is laid on budget planning and budgetary release than performance of programs (Ojo, 2012)</td>
</tr>
<tr>
<td>Budgets may be successfully defended, without corresponding budgetary allocation (Ojo, 2012).</td>
</tr>
<tr>
<td>Planners and executors of policies hardly ever explore self-evaluation (Bouveyron et al., 2010).</td>
</tr>
<tr>
<td>Most local end-users exhibit lackadaisical attitude. Since they are usually not sufficiently involved in policy planning co-ordination, they also fail to evaluate and express their dissatisfaction (Bouveyron et al., 2010)</td>
</tr>
<tr>
<td>Relationship between efficiency of results and invested resources are not always clear, so that end users are unable to categorically declare if the policy is being successfully implemented (Rydin, 2003)</td>
</tr>
<tr>
<td>Ad hoc committees’ policies are more popular. They are temporary measures with no deliberate process. Formulated policies are characterised by lack of maturity and gestational period. (Usman, 2009)</td>
</tr>
<tr>
<td>Relevant policies are not backed by effective sanctions for breach, nor do they have adequate enforceability (Usman, 2009)</td>
</tr>
<tr>
<td>The review in the relationship among policies, programs and projects may not be adequate. For instance, there is a close relationship between the policies of Federal Ministries of Health, Environment and Water Resources, since they all address potable water matters, but there is a dearth of collective review, cohesion and co-ordination in their programs, so that conflicts often arise.</td>
</tr>
<tr>
<td>Policy reduction- In dealing with one issue, others not remotely envisaged emerge (Lindh, 1979).</td>
</tr>
<tr>
<td>Data availability and appropriateness- Lack of good databank or data bank over-load may be frustrating (Lindh, 1979).</td>
</tr>
<tr>
<td>Time and policy evaluation- Usually, policies over-lap or goals may shift with time (Lindh, 1979).</td>
</tr>
<tr>
<td>Spatial dimension- Environmental policies have globalised flavour and are therefore not bound by administrative borders and it is difficult to identify one administrative level as most appropriate for policy evaluation (Rydin, 2003).</td>
</tr>
<tr>
<td>Level of observation and analysis- Evaluation of multi-level environmental policies may have successfully been carried out over the years, but there is no standardised methodology for this.</td>
</tr>
<tr>
<td>Corrupt practices in administration. It results in the subservience of merit to demerit and mediocrity.</td>
</tr>
<tr>
<td>In Nigeria, policies are hardly evaluated (Orubu, 2006).</td>
</tr>
</tbody>
</table>

Table 3.2: Impact of policy evaluation on potable water management

<table>
<thead>
<tr>
<th>IMPACT OF POTABLE WATER POLICY EVALUATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluating a policy will be of great advantage to the government and researchers in identifying areas of weakness and strength in a governance (Crabbe and Leroy, 2008).</td>
</tr>
<tr>
<td>It is necessary that the ordinary users should be able to evaluate a program on its probable effectiveness (Guba and Lincoln, 1981).</td>
</tr>
<tr>
<td>Examination of the efficient use of financial provision may be carried out since, evaluation indicates accountability because of the subsequent reporting to users (Louka, 2008)</td>
</tr>
<tr>
<td>An assessment of relationships in the vision, planning and implementation of goals and objectives can be carried out</td>
</tr>
<tr>
<td>It shows transparency in governance, by using the information system, increasingly requested by the public, based on the principle of disclosure (Crabbe and Leroy, 2008)</td>
</tr>
<tr>
<td>It enables users’ measurement of their satisfaction for policies implemented</td>
</tr>
<tr>
<td>It keeps the relevant House Committee of the National Assembly and State Assembly abreast of developmental strides of particular government agency on water supply.</td>
</tr>
<tr>
<td>The changing face of technology, which gets more sophisticated, demands evaluation of every activity, while encouraging innovative suggestions (Crabbe and Leroy, 2008)</td>
</tr>
</tbody>
</table>
3.7 EFFECTIVENESS OF LEGAL FRAMEWORK SUPPORTING THE SUPPLY OF POTABLE WATER

The institutional management, their policies and supporting enactments have been discussed in foregoing sections. A fundamental question is, how effective have they been in dealing with the challenges in the potable water sector? It is necessary to first examine the context of effectiveness. It will provide a fair understanding of the direction to follow in evaluating a legal framework.

In contextualizing the ‘effectiveness’ of a legal framework, Bernie and Boyle (2002) argued that it may be interpreted by basing it on inherent value judgment, since multiplicity of meanings may be attached. It is contended however, that a definition that works in one case, may fail in another. Underdal et al. (1999a), in flawing the argument, proposed that, whatever alternative meanings are provided, may be resolved into a single meaning, by asking whether, the objective of setting up the law is achieved. In clarifying this further, they stated that a legal framework may be considered effective when, and if, it successfully performs certain functions or solves the problems that motivated its establishment. Fundamentally, this is the meaning of ‘effectiveness,’ within a contextual interpretation. However, the definition may be considered insufficient to be useful as an analytical tool for systematic empirical research. In considering the elusiveness of the word, Young and Levy (1999) suggested that it may connote different ideas, requiring a problem solving, legal, economic, political or normative approaches. They further argued that, effectiveness may connote the contributions that institutions make, in solving problems, which motivate actors in investing their time and energy needed to create them. Howlett and Ramesh (2003), in their argument, declared that ‘effectiveness evaluation’ is the act of assessing whether, the stated policy goals are achieved. Dovers (2005) used the plain approach. The Australian Government Department of Finance (2007) and the Australian National Audit Office (1996) considered ‘effectiveness evaluation’ as inquiring whether, a
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program is achieving stated objectives. Robson (2002) qualified ‘effectiveness’ as the attainment of planned goals, while Cunningham et al. (1999) argued that ‘effectiveness’ contributes to environmental improvement. Zaelke et al. (2003) viewed the interpretation from a legal perspective and argued that, it is a measure of how successful law is in solving the problem it was designed to address. This definition serves the purpose of this study and will be adopted. This is in furtherance of the declaration by Bartel (2003) that, “there are a number of methods of assessing whether a law has been successful. Traditionally, the success of law has been measured according to arrests of convictions, i.e. the processing rates of criminals. A law also needs to be assessed in terms of its achievement of legislative aims in the sense of its being equitable, transparent and certain in application”.

3.7.1 The Use of Evaluating Effectiveness of Legal Framework for Potable Water

In considering the preferred definition (Zaelke et al., 2003), it becomes incumbent on policy-makers, to first of all address discernible gaps (Table 3.1) and evaluate a subsisting law and policy supporting a project prior to a proposed innovation. This is intended to stimulate necessary reformation. For example, evaluating effectiveness of the legal framework for potable water encourages numerous researchers to focus on the issue of water scarcity and produce valuable contributions at different levels and from different perspectives. At the global level, the UN, WHO, World Bank, States and NGOs have proffered and developed technical and scientific knowledge. They are backed by legislations and policies, to stem the challenges of potable water scarcity and pollution. These have emerged as a result of the release of information gathered from the critique of discernible gaps in environmental legal framework (Miles et al., 2002). Awareness is, thus, raised with decision-makers, potable water stakeholders (State and non-state actors) in the sector. The exercise points the way forward on innovative ideas capable of transforming an ineffective potable water sector. Miles’ argument has been
supported in the UN World Water Development Report (2015), which stated that, valuable criticisms and identification of defects are necessary for the protection of potable water supply, which is often in the arena of serious socio-political conflicts. Thus, evaluation of effectiveness may be regarded as critical for promoting accountability and understanding whether, what is been done is right or wrong (Ki-Moon, 2015).

Potable water supply is a complex sector, in which researches may not be sufficiently encouraged. Its evaluation, therefore, creates an avenue to observe the omissions of the past and to decide the best way forward- both for the present and the future. Even when a legal framework is adjudged successfully implemented, it should still undergo the process of evaluation to identify its level of effectiveness (Guba and Lincoln, 1981).

By the foregoing, ‘effectiveness’ should bear a contextual interpretation, which the paragraphs have addressed. Thus, the gaps in the Nigeria legal framework for managing potable water are fundamentally, lack of enforceability and compliance, which have an over-arching effect implicating policy evaluation. However, SD consists of several mitigating factors, capable of over-riding the ineffectiveness in the potable water sector. The next sections illuminate further on the assertion.

### 3.8 SUSTAINABLE DEVELOPMENT AS FULCRUM FOR DEVELOPING NEW POLICY APPROACHES

For more than two decades, the predominant theme in most International Environmental fora has been the concept of SD. It occupied the front burner in the Brundtland Report (1987), with a projected definition, that it is a “development which meets the needs of present generations, while not compromising the ability of future generations to also meet their needs”. The report stated that” sustainable development is not a fixed state of harmony, but rather a process of
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support life on earth: the atmosphere, the waters, the soils and the living resources”. The foregoing was stated as the minimum criteria for achieving SD.

In line with the report, SD seeks to change the face of development by adopting a model operating beyond conventional economic theory (Blewitt, 2008). The emphasis shifted from traditional perception of economic growth as a determinant of political and ecological development, to an interlocked system, in which environmental matters also shape economic and political trends (Simpson and Fagbohun, 1998). SD has, therefore, occupied a prime position in the global terrain, by aiming to integrate long-term ecological considerations into social and economic development strategies. It is achieving this by focusing on harmonising the world’s economic needs with environmental protection (Blewitt, 2008). This is further enhanced by confirming results, by which it is considered as a developmental concept that protects the environment to promote social justice, even when there are challenging contradictory feelings and attitudes illuminated by Lowther et al. (2009). SD’s requisition is that of dialogue, which implies dialogue of values, encouraging human beings to learn, discover and evaluate (Blewitt, 2008). By the Rio Declaration (1992), all states and people should co-operate in the essential task of eradicating poverty as an indispensable requirement of SD (Auty and Brown, 1997). This may decrease the disparities in standards of living, to meet the needs of majority of people in the world (McEldowney and McEldowney, 2010). A pointer was given, that a major constraint to the concept of SD is unsustainable patterns of production, consumption and inappropriate demographic policies (Auty and Brown, 1997). Thus, the concept of SD involves the reduction of undesirable impacts made by humans and enabling the repairs of parts of the environment, which have been previously unsustainably utilised (Fisher, 2003).

In adopting SD as the fulcrum of potable water policy development, this study is mindful of the argument that, the principle lending potential coherence and unity to the systems in the
environment, is, sustainability (Fisher, 2003). It is about exploring better ways of doing things, both for the present and for the future (Brundtland Commission, 1987). This does not suggest that SD has an overall universal acceptability or that it is clear in tenor or absolutely enforceable in practice. However, the concept is in one form or another, the fulcrum around which, environmental law is evolving and it is the nature of sustainability that is empowering environmental law in its adoption of new approaches and mechanisms (McGrath, 2010). SD approach is imbued with several benefits, in which everybody’s involvement is encouraged to ensure needed transformation or change, while local activity is highlighted (Brundtland Commission, 1987).

3.8.1 Criticisms of Sustainable Development

Criticisms have trailed the adoption of SD as the major objective, against which environmental policy development may be anchored. This is based on the notion that, it may at best be one of the various objectives. For instance, the suggestion by Birnie and Boyle (2002) that, not all environmental challenges necessarily involve SD or vice versa. However, such a view and criticism missed the point that environmental SD is not a factor to be balanced against other considerations, because, it is in itself, the balance (Bates and Lipman, 1998). The argument of Bernie and Boyle may also be debunked due to the status of SD as the over-arching objective and paradigm of international and national environmental legal systems (McGrath, 2010). Thus, the evidence of state practice of SD is identified in international protocols, including the provisions of the Stockholm Declaration (1972), which served as the precursor to the preamble of the Rio Declaration (1992). The processes of planning- for example, the inclusion of EIA and
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the mechanisms, through which SD is achieved (such as the National Policy on Environment\textsuperscript{86} in Nigeria), have everything to do with balancing competing uses.

Another criticism is that SD is centred on strong anthropocentricism, contradicting the environment motif of the Rio Declaration (1992) (Simpson and Fagbohun, 1998). This argument was reinforced by Principle 3 stipulating that “the right to development must be fulfilled, so as to equitably meet developmental and environmental needs of present and future generation”. The criticism arose because the provision was read in parts (“the right to development must be fulfilled...” The concluding part “so as to equitably meet development and environmental needs of present and future generation” was watered down) and not as a whole. In their argument, Simpson and Fagbohun (1998) declared the assertion as unfounded. This is because, Principle 1 gives human beings’ entitlement to a healthy and productive life “in harmony with nature,” while Principle 4 is a reconciliation of anthropocentricism and ecocentric view that, “In order to achieve sustainable developments, environmental provision shall constitute an integral part of the development process and cannot be considered in isolation from it”.

SD does not claim that every part of the environment is developed or exploited by humans, but since it is explored for the repairs of un-sustainably used environment and the reduction of human impacts, SD has everything to do with the environment (Atsegbua \textit{et al.}, 2004). Furthermore, the concept has more far-reaching implications than the continuum it is represented to be, far more complex than the balancing of social, economic and environmental interlocking. This is the question of balance, which indicates that SD improves the total quality of life. In so doing, cognizance should be accorded the peculiarities distinguishing environmental challenges, which may be at the global, national, regional or local levels (Ricklefs \textit{et al.}, 1984).

\textsuperscript{86} 1992
For instance, freshwater is a life-support system in Nigeria. However, its problems are peculiar to the country (such as the reasons for its scarcity and pollution). The consideration of whether potable water is sustainably provided must therefore be anchored on its national peculiarity or the peculiarity of a state (such as the Delta State of Nigeria), which is selected as the study area.

3.8.2 Sustainable Development and Recognition of Participation

Generally, development indicates promises, which may only subsist with sustainability. This provides recognition for the involvement of a broad spectrum of Nigerian water users, for policy implementation. While SD may play an express role in policy development of potable water supply by endorsing participation, it has implicitly also supported the right of citizens in this regard (Hildering, 2006). This is an indication of the evolvement of inter-connectivity between Human Rights to water supply and the right to participatory activities, which may arguably be linked to the right to associate as a provision in the Constitution of the Federal Republic of Nigeria 1999\textsuperscript{87}. The following chapter will examine the nexus with good governance.

3.8.3 Nigeria Environmental Laws: Sustainable Development and Overt Legal Duty

There is a constitutional provision imposing a legal duty on the state to ensure SD of the environment, which includes potable water supply. Constitution of the Federal Republic of Nigeria 1999\textsuperscript{88} states that-

“\textit{The State shall protect and improve the environment and safeguard the water, air and land, forest and wild life of Nigeria}”.

The operational words consistent with SD are ‘\textit{protect}', ‘\textit{improve and safeguard}'.

\textsuperscript{87} Section 40.
\textsuperscript{88} Section 20
The NESREA Act\textsuperscript{89} explicitly imposes a legal responsibility on the Agency for the promotion of SD thus:

“The Agency shall, subject to the provision of this Act, have responsibility for the protection and development of the environment, biodiversity conservation and sustainable development of Nigeria’s natural resources in general and environmental technology, including coordination and liaison with relevant stakeholders within and outside Nigeria on matters of enforcement on environmental standards, regulations, rules, laws, policies and guidelines”\textsuperscript{90}.

As an overarching policy framework, the National Policy on Environment\textsuperscript{91} imposes policy imperatives in which there should be coordination, environmental protection and natural resources conservation for SD. This may be achieved by securing environmental quality, adequate for food, health and well-being, sustainable use of natural resources, restoration and maintenance of ecosystem diversity. These should include promoting understanding of linkages between the environment, socio-economic development issues, encouraging individual and community participation in environmental preservation, partnership building among stakeholders in governmental levels, international institutions, non-governmental agencies and communities, on environmental matters.

3.9 CHAPTER SUMMARY

The chapter examined the implementation of the current legal framework protecting potable water in Nigeria. Significant issues were clearly defined. A major one was the problem resulting from applying more than one law in a given jurisdiction. There was a definition of the subject matter and the parties likely to be governed by Customary Law. The chapter discussed government’s role in protecting water supply, while the impact of policy evaluation was examined as an advantageous procedure for effective water management. By discussing the

\textsuperscript{89} 2007
\textsuperscript{90} Ibid, Section 2
\textsuperscript{91} 1999
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general and inherent challenges in policy implementation, the chapter pointed at lacuna in the legal framework for policy implementation. This may, however, be mitigated by adopting the concept of SD, which is elastic in allowing innovative approaches and participatory activities of stakeholders. This may be identified as enabling human rights to potable water.
CHAPTER 4: THE THEORY OF GOOD GOVERNANCE

4.0 INTRODUCTION

The third objective is to identify and review governance theory, to reveal an understanding of the principles of transparency, accountability and participation (TAP), which reflect in the participatory process and Human Rights to water. In response to this, the chapter focuses on the global recognition of the theory of good governance, characterised by a linkage of TAP. The elements are contextualised, while the potentials, implications and constraints are examined. The international interpretation of the import of social, economic, environmental and political dimensions of governance in the supply of potable water is examined. The chapter discusses the evolution of participation, the various practiced forms and its linkage and implications with Human Rights to water. The significance and applicability of the concept of participation, as the epicentre of the research, is canvassed by identifying roles of stakeholders with regard to Human Rights. The extent of applicability of participation in its contextualisation, within Nigeria is revealed. Contemporary models for participatory water governance are reviewed, while countries already practicing forms of participatory process for potable water supply are identified to serve as precedents for advocacy.

4.1 THEORY OF GOVERNANCE

Governance refers to lateral and inter-institutional relationships in administration (Frederickson and Smith, 2003). This definition takes account of the descent in sovereign powers, reduction in jurisdictional boundaries and fragmentations of institutional hegemony (Frederickson and Smith, 2003). Thus, contemporary emphasis on the governance theory as panacea for ineffective administration may, result in bureaucratic and hierarchic order reduction, while the
relevance of centrality in authority may gradually provide opportunity for divergent representation.

4.1.1 International Recognition of the Theory of Governance

In the past years, governance as a theoretical concept, has emerged as a predominant issue in international discourse and debates. It has been identified as a major theory, capable of bridging administrative gaps, while providing basic principles for effectiveness. The United Nations Development Program (1997) regards the theory as “the exercise of economic, political and administrative authority to manage a country’s affairs at all levels”. Governance, thus, consists of “mechanisms, processes and institutions, through which citizens and groups articulate their interests, exercise their legal right, meet their obligations and mediate their differences” (UNDP, 1997). In the foregoing definitions, the holistic dimensions of governance pinpoint a nation’s capabilities for effectively charting environmental resource management, considered relevant in a study focused on water governance.

The Dublin Conference (1992) paid considerable attention to objectives reflecting water governance, while the Global Water Partnership (GWP, 2000a), stated at the World Water Forum at The Hague (2000), that “water crisis is often a crisis of governance”. It, therefore, advocated effective water governance, as one of the top-most priorities for action (Rogers and Hall, 2003). The Hague Ministerial Declaration (2000), supported views on wise governing of water to ensure good governance, public inclusion and recognition of stakeholders’ interests in water resources management. In furtherance of international focus on governance, the UN Millennium Assembly (2000) called for stoppage of unsustainable exploitation of water resources and the development of water management strategies at regional, national and local levels, to promote equitable access and adequate supply. Water governance was the most
prominent among the three recommendations made at The Bonn (2001) Freshwater Conference. It was decided that, “each country should have in place, applicable arrangements for the governance of water affairs at all levels and where appropriate, accelerate water sector reforms” (Rogers and Hall, 2003). The World Summit on Sustainable Development (2002), attended by Heads of State, endorsed the last declaration by setting a specific target for the preparation of Integrated Water Resource Management (IWRM) and plans for water efficiency by the year 2005.

4.1.2 Contextualization of Good Governance by the United Nations

Good governance may translate to potable water governance, when processes for socio-political, organizational and administrative enablement are made available for community members (UN Virtual Learning Centre, 2008). These ensure that community members are able to express their interests on the development and management of potable water resources and the delivery of services (UN Virtual Learning Centre, 2008). Some key elements of good water governance identified by the United Nations and International Fund for Agricultural Development (IFAD) (2006) are necessary for the actualization of these processes.

‘Participation and Equity’ indicates that regardless of sex or societal positions, everybody should have equal opportunities of being heard in decision-making, for efficient potable water supply (Rogers and Hall, 2003; UNDP, 2013). This may, in the long run, ensure a feeling of well-being and a sense of belonging. ‘Transparency’ implies that information flow and transparent decision-making, open to public scrutiny are necessary. Thus, the right to access information is defined by openness and not shrouded in secrecy. ‘Accountability’ indicates that government actors in the potable water sector, corporate organisations and civil society organisations owe accountability to potable water users or to representatives, of their interests. ‘Responsiveness’
shows that, institutions should accord potable water stakeholders, proper response. Thus, preferences, nascent circumstances in socio-economic developmental needs are attended to. ‘Coherence’ indicates that, although water issues are inherently complex, policies and actions taken must have coherence, consistency and stakeholders’ easy understanding. ‘Integration’ shows that water supply should be capable of promoting and enhancing integrated holistic approaches, enabling sustainability. This is because, a major cornerstone of every community is the sustainable water supply (Bakker, 2003). ‘Ethics’ indicates that water governance must be based on ethical principles located in the community or society where it is functioning. Community potable water traditional rights should not be disregarded (Lindh, 1979; Rogers and Hall, 2003). This issue had been canvassed years before, by the World Conference on Science (1998), where proposals were made that, “modern and traditional approaches to water supply management need to be taken advantage of while recognizing different cultural backgrounds and indigenous management techniques”.

Good governance should be flexible in incorporating socio-political changes, reflecting shifts in government traditional approaches of managing potable water, to a collaborative and inclusive PWG process. Thus, management dynamics should be clearly defined and practicalised. This may be achieved through an implementation, inclusive of a broad spectrum of stakeholders. These elements will be incorporated into the conceptual framework for participatory water governance, developed in the study after a reduction process and further discussed (Chapter 4.5).

4.1.3 Dichotomy in Good Governance and Government

Contextually, governance elucidates the process, through which stakeholders may articulate their interests. The stakeholders project their input, decisions are taken and implemented, while
decision-makers are held accountable (Mark, 2013). As an interactive arrangement, governance enables participation of multiplicity of persons, to solve social problems or chart new opportunities, within which institutional activities may be governed (Schmitter, 2010). As a method, actors arrive at mutually binding decisions over problems, by negotiating and cooperating to implement the decisions (Schmitter, 2010). Conversely, government consists of state based institutions, characterized by hierarchical, top-down, command-and-control forms of normative rules. They may be regarded as legitimate, through formal representations, control and accountability, regarded as socially acceptable (Schmitter, 2010). However, governance system is at variance with this latter description, since it is based on a top-down/bottom-up network of inter-active relations, between inter-dependent but independent actors. The actors share considerable degree of trust, in which internal controversies and resistance to institutional agenda may be disregarded. This is because of actors’ involvement in decision-making forms, in which their diverse interests are involved.

Based on the foregoing, governance processes’ reflection in the quality of participation is necessary, to ensure that socio-political and economic priorities are anchored on a broad consensus in society (Rogers and Hall, 2003). Thus, the voices of those excluded from basic amenities, societies’ poorest and the most vulnerable are represented in decision-making processes (Weiss, 2010).

Good governance involves the existence of efficient, accountable, political, economic, administrative and corporate institutions (Louka, 2008). It includes the application of institutionalized rules, promotion of Human Rights, respect for the Rule of Law and freedom of people to participate and be heard in decisions affecting their lives (Pateman, 1970). While good governance focuses on performance, inclusion is the operational epicenter (Rogers and Hall,
The theory of good governance

2003). Inclusion gives voice, power and influence to persons involved in governing procedures (Kaufmann et al., 1999). Scholastic opinion of good governance may, therefore, presuppose it as the most important single factor for eradicating poverty and promoting development (Annan and Mousavizadeh, 2012).

4.2 POTENTIALS OF GOOD GOVERNANCE IN POTABLE WATER SUPPLY

Good governance is in response to global water crisis (UN Virtual Learning Center, 2008). Thus, its emergence in policy management has assumed rapid recognition, as one of the most critical ways of improving the sustainability of water resources and services. It is, however, not actually directed at the resource scarcity. Neither does it pertain to how scanty water has become, but on how to create accessibility to all stakeholders, through water governance approaches (Louka, 2008). In this regard, good governance has been adjudged implicit in decreasing gender inequalities (UNESCO, 2006). The introduction of inclusion and institutional fair rules and practices, governing social interactions have capability for improving relationships with vulnerable people. Some of these are- the aged, poor, physically challenged, women and the younger generation (Bigas, 2012). These persons should not be disrespected by fundamental Human Rights infringements, capable of eroding their dignity (Bigas, 2012). Notably, women can be involved as co-decision makers of water supply with the men, thus, obviating marginalization by gender inequality (UNDP/IFAD, 2006).

Good governance enables reflections of environmental and social needs of future generations, expressed in contemporary policies and practices (IFAD, 2006). Thus, by focusing water development policies towards the eradication of poverty, it may eliminate social insecurity and improve potential livelihood of all the sexes (UNDP, 2013). The concept is imperative for effective performance of organisations. It underpins important functions, in which rules are
enforced and adapted as required. Contentious issues, such as conflict mediation, trust, legitimacy and accountability development are reflected (Bakker, 2003). Efficiency and cost effectiveness in service provision, leading to increased users’ responsiveness, are some indices of good governance (Bakker, 2003). They are realizable in restructuring, to improve performance (UNECE, 1998). This may be directed at the water sector in conjunction with plurality of stakeholders in fulfillment of the embracing dictates of participation concept (UNCED, 1992).

Flexibility in adopting other approaches may be enabled by good governance (Bakker, 2003). Within these approaches, inclusion and collaboration may be practiced for effective water management (Rogers and Hall, 2003). By having direct implications for potable water reforms, it is capable of affecting stakeholders’ livelihood and catalyzing emergence of larger social changes, through the participatory process (Bigas, 2012). Good governance in potable water supply may, therefore, necessitate the indices hereby identified (Figure 4.1).

![Figure 4.1: Good governance in potable water supply](image)

Figure 4.1: Good governance in potable water supply
4.3 CONSTRAINTS TO GOOD GOVERNANCE IN POTABLE WATER SUPPLY IN NIGERIA

Good governance goes to the roots of effective developmental strides, although inundated with problems. In Nigeria, these problems render the achievement of effective potable water supply, difficult in practice. The problems may be generalised and attributable to a host of hydrological processes (George, 2006). For example, modelling problems, in which foreign models are foisted on non-state actors of potable water, which remove them from the reality (Schulz, 1999), lack of coherent policy formulation, implementation and evaluation (Ladan, 2004). These issues reflect in enforceability and compliance challenges (Beckerman, 1992; Kienzle et al., 1997; Schulz, 1999). They may be summated as controversial, although converging under the ineffectiveness of the legal framework (Simpson and Fagbohun, 1998) for water provision in Nigeria. The following discussions focus on some major specific constraints militating against good governance and experienced in Nigeria water sector.

4.3.1 Constitutional Gaps

Arguments on constitutional gaps indicate ineffective institutional management of potable water (Goldface-Irokalibe, 2006). While the 1999 CFRN provides expressly for environmental protection\(^92\), potable water is impliedly provided for in an omnibus clause, in which the National Assembly is empowered to make Laws under Concurrent Legislative Lists\(^93\). Thus, ineffective coordination and coherence in water management may be rooted in constitutional gaps (Akhionbare et al., 2007). These problems are increased by divergent potable water sources, scarcity and pollution challenges (Longe et al., 2007). Constitutional provision ought to provide express and un-ambiguous information on the ministry or agency responsible for specific

\(^{92}\) Section 20
\(^{93}\) Section 13 (c)
functions (Ladan, 2004) because of multiplicity of water managers in Nigeria. Thus, multiple institutional management may result in inconsistencies in management practices, reflecting incoherence and ineffective articulation of policy formulation, implementation of policy guidelines and evaluation (Ajayi et al., 2003).

Lack of express constitutional provision for Human Rights to water is an infringement, capable of constraining water governance (Sultana and Loftus, 2010; Ajai, 2012). Litigating may therefore, be fraught with legal hurdles, in which technicalities override the substance of the matter. The Constitution of the Federal Republic of Nigeria 1999’s provisions of the Right to Life\textsuperscript{94} and the Right to Dignity of Human Person\textsuperscript{95}, may only be interpreted impliedly to reflect Human Rights to water, but, difficulties in litigating for breach may be envisaged. However, Courts may rely on International Law precedents, exemplified in the case of Gani Fawehinmi v Abacha\textsuperscript{96}. Reference may also be made to Fundamental Objectives and Directive Principles of State Policy on Socio-economic Rights, used in the case of SERAP v Nigeria\textsuperscript{97}.

Omission of Human Rights to water in the CFRN may be regarded as a contraindication of the provisions of SD, which advocates for security of environmental quality, adequate for good health and well-being, expressed in the National Policy on Environment\textsuperscript{98}. Thus, Human Rights to water contains grave import for democratic governance, which is directly relevant to PWG theory, discussed in this study.

\textsuperscript{94} Chapter IV, Fundamental Rights, Section 33
\textsuperscript{95} Ibid, Section 34
\textsuperscript{96} [1996] 9 NWLR (pt. 475) pp. 710
\textsuperscript{97} [2012] ECW/CCJ/JUD/18/12
\textsuperscript{98} 1989
The Constitution of the Federal Republic of Nigeria 1999, provides for its supremacy\textsuperscript{99}, which renders any conflicting law void. The principle of \textit{ultra vires} is invoked for breaches in this regard (Nwabueze, 1982). This implies that, every water law should take authority from the instrument. This may be regarded as a limitation of water managers’ capacity in taking pro-active steps (independent of constitutional encumbrances). This limitation is contrary to the spirit behind SD, which requires a national mechanism for environmental management. It requires co-operation, co-ordination and regular consultation for harmonious management and governance of sectors, enunciated in the National Policy on Environment\textsuperscript{100}.

The constitutional framework permits federal and state governments to develop legislations for managing resources (Ladan, 2012). However, the states are insufficiently empowered to develop and enforce legislations, which promote best practice for water supply. State legislations are therefore, inadequate in supporting environmental management objectives. This reflects the peculiar brand of federalism, exercised by the federal government’s absolute centrality of powers, while states are relegated to the fringes (Nwabueze, 1982). The assertion is buttressed by the Water Resources Act\textsuperscript{101}, which provides extensive ministerial powers\textsuperscript{102}. The powers limit all other water resources agencies in the country, who are, by implication, precluded from exercising control and regulations over potable water sector. This has thus, limited proper analysis and evaluation of policies, which seek the way forward, for implementing good governance principles.

\textsuperscript{99} Section 1 (3)
\textsuperscript{100} 1999
\textsuperscript{101} 1993
\textsuperscript{102} Ibid, Section 8
4.3.2 Obsolesce of Legislations

Many existing laws are outdated and may be traced to colonial pre-1988 era (Caldecott, 1996). The situation is contrary to the National Policy on the Environment\(^{103}\), which provides that “actions shall be taken from time to time to streamline all legislations and regulations relating to the environment\(^{104}\). This exercise will be required in re-organising them into a holistic and integrated compact that recognises the cross-sectoral linkages of the environment”\(^{105}\). However, dearth of innovation in legal drafting, negates the principle of sustainability for developing new approaches and mechanisms, which can improve the supply of potable water.

4.3.3 Lack of Adequate Decentralization

Globally, many governments recognize localization of water management, which exemplify good governance (Schmitter, 2010). However, in Nigeria, delegation has not been sufficiently explored as a tool for effective water delivery, in which power and responsibilities are deliberately shared (Ladan, 2012). Persons with responsibilities for governing may, therefore, lack political will to execute and coordinate affairs (UNDP/IFAD, 2006).

Some nations have sought avoidance of inherent water governance challenges, particularly identified in centralized systems of government (Louka, 2008). Institutional reforms, targeted at decentralized water management systems have therefore, been initiated. Local authorities have been tasked with ensuring service provision in that regard and exemplified in Ghana (Harry and Morinville, 2013) and South Africa (Clark, 2012).

\(^{103}\) 1989
\(^{104}\) Section 8.0 (b)
\(^{105}\) Ibid.
4.3.4 Lack of Participation

Public Participation as a notable principle emerging from UNCED (1992)\textsuperscript{106}, represents policy goals, which developed and developing nations support (Sand, 1993). It provides that environmental issues are best resolved with the participation of all concerned citizens at the relevant levels. The 1999 CFRN portrays the importance of participation by providing that “the participation by the people in their government shall be ensured in accordance with the provisions of the Constitution”\textsuperscript{107}. The essence of participation is, thus, reflected in the National Policy on Environment in Nigeria\textsuperscript{108}, the Environmental Impact Assessment Act\textsuperscript{109} and the National Water Supply and Sanitation Policy\textsuperscript{110}. The instruments’ provision on participation may, however, be criticised as mere rhetoric, not substantiated nor pragmatically defined in management (Oludayo, 2004).

An emerging participatory process is one of the tools for actualising the principle of participation (Hickey and Mohan, 2004) in the potable water sector. Some other countries, like South Africa and Ghana, have successfully explored this (Kidd, 2008; Chowdhury et al., 2011). However, provision for participation is not in the Water Resources Act\textsuperscript{111} of Nigeria, implying a top-down administered sector, which excludes users in the agenda for potable water supply.

4.3.5 Modelling Problems

Gaps may be identified in the hydrological process of the country, reflecting in modelling issues, in which Eurocentric water models are foisted on Nigerian water setting. However, for a typical

\textsuperscript{106} Principle 10
\textsuperscript{107} Fundamental Objectives and Directive Principles of State Policy, Section 14 (2) (c)
\textsuperscript{108} Section 6.6
\textsuperscript{109} 1992
\textsuperscript{110} 2000
\textsuperscript{111} 1993
African setting, a model should reflect smaller scales, sensitive to land use and management and enabling community members’ involvement, from the beginning of a water project, to encourage their input (Schulz, 1999).

4.3.6 Lack of Information

UNCED (1992) provides that at the national, state and local level, individuals should have appropriate access to information\textsuperscript{112}. Government is expected to facilitate and encourage public awareness and participation in decision-making, by disseminating information about the environment. However, public awareness on policies is scanty or non-existing, due to lack of information, deliberate secrecy and lackadaisical attitude to public affairs (Ogbodo, 2010). Local groups are excluded from decision-making, while capacity to act is withheld by persons with higher social positions (Nwosu, 2004).

4.3.7 Gaps in Legislations

The National Environmental Standards and Regulations Enforcement Act\textsuperscript{113} (NESREA) is the over-riding standardizing and regulating environmental law in Nigeria. The gaps in the legislation have been discussed in the foregoing (Chapter 3.5).

4.3.8 Overlap in Institutional Management

The Ministries and agencies operate under over-lapping policies and practices, which militate against due co-ordination and coherence in water policies. While the gap results in multiple conflicting instructions, it negates strategies for harmonious management of policy process,

\textsuperscript{112} Principle 10
\textsuperscript{113} 2007
through the establishment of effective institutions and linkages, within and among the various
tiers of government (Nwankwoala, 2011).

4.3.9 Planning, Implementation and Evaluation Challenges

These challenges, identified as gaps in potable water management in Nigeria, increase existing
problems to greater dimensions (Ikoni, 2010). This is as a result of the adoption of ‘ad hoc’
approach for most policy planning (Usman, 2009). Temporary measures adopted, do not enable
sufficient sustainable problem-solving strategies, neither do they allow gestation of policies. In
Nigeria, policies are hardly evaluated, while planners and executors of projects hardly explore
self-evaluation (Orubu, 2006). The problem is further complicated, since most local end-users
exhibit apathy, due to non-involvement in policy planning, co-ordination or evaluation from the
beginning of programs. Users also fail to register dis-satisfaction about service provision
because, the relationship between efficiency of results and invested resources are not always
clearly defined. End users are thus, unable to lay complaints that a particular policy is being
unsuccessfully implemented or commend good implementation.

4.3.10 Challenges in Payment of Water Rates

Potable water supply as economic goods (Dublin Conference, 1992) implies the importance
of first recognising the basic rights of human beings to access affordable clean water and
sanitation. However, few Nigerians pay water bills, since there is no provision on how water
consumption may be assessed for payment as goods (particularly, when metering is not
provided). This creates financial difficulties in infrastructure maintenance. SD demands a very
broad view of consumption, so that, it is also incumbent to exercise an equally wide view of

Principle 4
capital (Dovers, 2005). Managing potable water resources efficiently, is a way of sustaining the national financial resources and enhancing the potentials of SD, which translates into whether a country’s wealth is managed to ensure consistent infrastructure maintenance (Blewitt, 2008).

4.3.11 Dearth of Experience and Professionalism in Governance Dynamics

There may be dearth of skilled managers to administer water sector affairs. This is capable of creating mediocrity within a specialized institution, requiring expertise (Kooiman, 2003). In Nigeria, personnel managing water are usually, in-experienced to handle responsibilities under good governance in potable water supply (MacGranahan, 2004).

4.3.12 Lack of Accountability

Corruption in water agencies has been cited as one of the reasons for the challenges in governance (Nwankwoala, 2011). Within the management purview, water contracts are over-estimated and contractors may not fulfill contractual obligations as a result of compromise of principles (Oludayo, 2004). The usual practice is contract ‘padding’ and execution with sub-standard materials, so that the durability of water infrastructure becomes suspect (Oludayo, 2004).

4.3.13 Politicization of Potable Water

Implementation of water policies, the management and supply of potable water have been politicized in the past years. There is evidence showing that, water as economic goods should be negotiated for, through lobbying (Sultana and Loftus, 2010). However, water supply has assumed an analogy of ‘carrot-dangling’ by political aspirants, seeking elective offices in Nigeria. The implication is that, disadvantaged and poor communities may continue to labour under
non-availability of potable water, since they lack the voice and determination to state their grievances (UNDP/IFAD, 2006).

4.3.14 Inadequate Power Supply

Effective supply of electricity is vital for regularity in provision of potable water (Nwosu, 2006). Socio-economic activities are dependent on supply of water and may indicate challenges for good governance when there is a lack (Mawali and Aminu, 2010).

The foregoing gaps may inhibit the institutionalization of good governance in potable water supply in Nigeria. The major purpose of identifying them is to set the foundation for advocacy on the importance of the concept of participation as an instrument of transformation and development for good governance in potable water. While the study is not focused on solving all the problems besieging the potable water management, it is however, intended that, the development of a new approach may ameliorate sectoral challenges in rural communities.

4.4 DIMENSIONS OF GOOD WATER GOVERNANCE: THE FOUR PILLARS

Gaps in the practice of good water governance in Nigeria, point to the relevance of measurable principles, which may be used to identify the success of good water governance and regarded as the four pillars of water governance (UNESCO, 2006). They may have been understated and underemployed in managing potable water, but, they are adjudged vital in representing diverse interests in decision-making processes (Rogers and Hall, 2003). They are crucial to the role of power and politics in the complex dynamics of water governance and provide a balance in potable water management. They are discussed in the following paragraphs:
Social dimension: It is the consideration of equitable access to water by the social strata, the even or uneven allocation and distribution among the urban and rural community members (UNESCO, 2006). It pertains to the utilization of water resources and the services rendered to diverse socio-economic groupings, which are important factors in determining the effects of water supply on the society. Thus, the identification of the quality and quantity of potable water, utilized by people is critical to the effects of water supply on the stakeholders. For example, the daily average water consumption in Northern America is 600 liters, it is between 350-250 liters in Europe and daily water usage in Sub-Saharan Africa is 20 liters (Institute of Water for Africa, 2012), while slum dwellers may access only 10-5 liters (UNDP/IFAD, 2006). The dearth of information militates against correctly deciding the quantity of water, which may enable good living, in Nigeria. This factor may however, be remedied by estimated needed quantity.

Economic Dimension: There should be efficient water use (UNESCO, 2006). This implicates the role of water allocation and supply in economic growth. The potentials for poverty reduction and economic growth remain dependent upon efficient potable water supply and other natural resources (UNESCO, 2006). This is achievable with effective information, which may be provided through seminars, workshops, rallies and the social media.

Political Dimension: Potable water supply is inextricably intertwined with political dynamics, in which parties may seek to impose their aspirations on others, who are less powerful (Kaika and Page, 2003). However, good water governance demands equitability, in which users of potable water are allowed their fair share of representation (UNDP Users Guide, 2013). This pillar indicates that stakeholders should be provided equal democratic opportunities in influencing and monitoring political processes and outcomes. Thus, women and other vulnerable potable water users should be entitled to equitability in potable water supply and decision-making
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(Sijbesma, 1987). In Nigeria, rural community members are usually voiceless to make demands and participate in decision-making as legitimate stakeholders of the water sector (Ogbodo, 2010). This may be adduced to the absence of governance principle (entrenching inclusion), which is hardly present in water management.

Environmental Dimension: It reflects improved governance, indicating sustainability in water use and ecosystem services (UNESCO, 2006). Improved governance may only result effectively, when stakeholders (whether as state or non-state actors), are included in planning, implementing, monitoring and evaluating potable water supply (Sehring, 2009). Thus, the preponderance for sustainability of water is high for participation as a compulsory element (Sehring, 2009). There is marked stakeholders’ involvement, signifying a paradigm shift from centralised state coordinated systems to plurality (Hickey and Mohan, 2004). Reforms imply inclusion, addressing issues on negotiation, dialogue, partnerships, networking governance and power diffusion (Hickey and Mohan, 2004). However, these may not be feasible without the portrayal of TAP as elements, relevant in a water governance system.

4.5 ELEMENTS OF GOOD WATER GOVERNANCE: TRANSPARENCY, ACCOUNTABILITY AND PARTICIPATION

Good governance is characterised by TAP (Dessing et al., 2011). The hallmarks are efficiency, responsiveness, inclusion in legitimate representation (Gaventa, 2004), respect for the Rule of Law and reduction of corrupt practices (Vincent, 2004). The individual attributes of TAP have fluidity, creating inter-lock of potentials. Transparency is generally identified as a key feature of good governance and an essential ingredient for accountability, between state and non-state actors of potable water. It involves information disclosure, access to information, observation of rules, actions and processes by governments, corporate organisations and individuals (Pierre,
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2000). It is therefore, anchored on the principle that, public offices should be openly conducted (McGee and Gaventa, 2010).

Accountability evolves, when individuals and organisations are held liable for executing powers responsibly (Jalal, 1999). This may be in accordance with the rules of their position and for paying due consideration to vulnerable parties (Jalal, 1999). Specifically, it is the responsible action of actors to users of water facilities (Rogers and Hall, 2003). It includes the sanctioning of actors for corrupt conduct and their capacity for role performance in assigned responsibilities (Bigas, 2012). This reflects the use of participation process for public consultations in the potable water sector. The linkage between transparency and participation is to the extent that, participation aims at empowering stakeholders at every phase of PWG. It is for the purpose of promoting, implementing, process monitoring and evaluation. Integrity therefore, runs through the whole process as an under-pinning principle of TAP (Bigas, 2012). Accountability is the behaviour regarded as consistent with ethical principle and standard, which may be adopted by individuals and institutions. It may enable the creation of barriers to corruption, which would in turn erase poor governance, seen as immediate causes of poverty (Sultana and Loftus, 2012).

Participation may be regarded as the epicentre in water governance. Thus, the relationship between accountability and participation is crucial in the conception of PWG. This is because, stakeholders are entitled to information on deployment of resources for a water program. It involves transparency about their right to access records on the reform. This results from the understanding that, communication is key in actualising Human Rights to potable water supply (Beliver and Kaufman, 2005).
TAP has emerged in the past decades, as ways of addressing failures in development and democratic deficiencies. Thus, TAP should be the hallmark of decision-making in the water governance (Conca, 2006). One of the assumptive arguments is that, accountability has capacity to erase corruption and in-efficiency in government sectors, producing better, visible results in governance (McGee and Gaventa, 2010). However, visibility of results may be dependent on well channelled information to water users. Thus, the problem of how information accessibility may affect accountability, so that, there can be an improvement in the quality of governance is an issue still poorly understood (Beliver and Kaufman, 2005). It may however, be clearer that, participation, as an integral part of good governance may, ensure empowerment in democratic processes, in the fusion of state and non-state actors (Williams, 2004).

The foregoing discourse identifies the distinction in the three elements as a fine thread criss-crossing their exposition and the way they may actively reflect in the issues of water management in a governance system. Participation is the center-piece, in which the remaining two elements are pointing and the following sections, will dwell on the concept and its import in water governance process.

4.6 EVOLUTION OF PARTICIPATION THEORY
Public participation is of immense interest to global environmental discussants, scholars and practitioners of environmental sustainability. The corresponding development of participatory techniques as enablement has also attracted much interest (Rowe and Frewer, 2004). This is arising from its recognition as a tool for solving potential crisis relating to public trust and
governance (Cornwall, 2008). It is commonly explored in most democratically constituted countries, such as the European Union nations (EEA Report, 2014).115

In the UK, public participation dates to the 1960s, when public attention was engaged with two influential documents— the “Skeffington Report”116 and Arstein’s “Ladder of Citizen Participation”117 (Cornwall, 2008). While the Skeffington Report (1969) is reputed to be the influencing factor for the Localism Act118, Arstein’s Ladder (1969) has enabled policy makers and others to see planning sequence in participatory projects, identify gaps and the best practice (Connelly, 2006). However, there were arguments about the relevance of participation in the water sector in the UK. Sceptics argued on the danger of the potential influence of participation, perceiving and citing it as a dangerous trend, which may tyrannically create social injustice and illegitimacy of the exercise of powers (Cooke and Kothari, 2001). The scepticism is however, gradually changing, although privatization and restructuring have limited impact on individual water users’ capacity to influence decision-making (Department of Environment, Transport and the Regions, 2000; Bailey, 2003; Page and Bakker, 2003), resulting from citizens’ dependence on state controlled lobbying by sanctioned pressure groups (Page and Bakker, 2003).

Public participation evolved between the 1960s and 1970s in the United States of America (Heidi and Malek, 2005). The public expressed concern about the process of decision-making in the three tiers of government. Subsequently, there was an emergence of different approaches, encouraged by the government, which intended to overcome the gaps and create better participation in decision-making (Heidi and Malek, 2005). Public hearing was the most popular

115 Aarhus Convention 1998
116 Skeffington Report on Public Participation in the Planning System (Skeffington Report, Cmnd 4276)
117 Arstein’s ladder was developed in 1969 and has retained relevance for contemporary issues on the concept of participation
118 2011
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of the approaches. Representatives of government provided proposals and invited public persons’ reactions by brief speeches (Rowe and Frewer, 2004). Most participants in such gatherings were government critics (Heidi and Malek, 2005). The advisory committee was another method, which did not make much impact, due to in-fighting (Rowe, 2000). In the ballot initiative, constitutional amendments were carried out by vote casting (Hastings, 2014). However, most of the participants hardly understood the import (Heidi and Malek, 2005). Presently, public participation is a relevant and mandatory approach for rules formulated by government executive agencies in the USA (Heidi and Malek, 2005).

Participatory process has proliferated economic development, as response to increasing public participation in development and humanitarian aid. Thus, several approaches and methodologies are emerging. For example, the provision of core values of seven standards for public participation practices by the International Association for Public Practitioners, which are proving relevant in participatory projects. The association was established in 1990 with global acceptability and affiliate organisations instituted globally. The association seeks to improve the practice of public participation relating to individuals, governments, institutions and other relevant entities affecting public interest globally. The core values provide that, the public should have a say in decisions about actions affecting their lives; Public participation should include the promise that public contribution shall influence decisions taken; The process should communicate the interests and meet the process needs of all participants; The process should seek out and facilitate the involvement of people potentially affected by proposed decisions; The process should involve participants in defining how they may participate—how the process may be structured; Public participation process should provide participants with information required for participation in a meaningful way, which should communicate to participants, how their input affects a decision.
From the foregoing discussion, it may be discerned that, public participation has evolved into a dominant concept, which builds citizens and stakeholders’ engagement into concretized processes for policy making. This reflects in considerable consultations, discussions via online, deliberative citizens’ jury and focus group researching (Rowe and Frewer, 2005). It may therefore, be argued that, the major objective of the centrality of participation is “to ensure the transformation of existing development practices and more radically, the social relations, institutional practices and capacity gaps, which cause social exclusion” (Hickey and Mohan, 2004). Another argument is that, “participatory interventions may facilitate political development of the poor, to make advancement within local power relations and propel their capacity to hold patrons to ransom” (Williams et al., 2003a).

4.7 CONCEPTUALIZATION OF PARTICIPATION

Participation refers to ‘involvement in a process’ (Carr et al., 2012). This broad based definition allows categorization, depending on participant’s level of involvement in a decision-making process. Within democratically recognized communities, some forms of public participation may be authorized under the governing laws and may be explored at various stages of projects (Stuart, 2003). The major objective of involvement is the legitimization of project (Haskell, 2001). Thus, the definition by Carr et al. (2012) permits a broad range of literature on participation, which may present in several forms discussed in the following paragraphs.

Participation where there is passivity of action: In this type, projects stakeholders are only informed about what is going to happen or has happened. Feedback is almost non-existing (Haskell, 2001) and no true ownership exists, due to non-involvement from the inception. In this instance, participation is often used by experts exploring technical solutions to solve political issues, while community members subsequently, ratify views (Mullaby, 2002). This approach
does not reflect reformation of a social order, since community members are merely recruited by well-placed community leaders (Fraser, 2005).

**Participation by consultation or information:** In this instance, experts, researchers or developers- ambitious of extracting some information, request stakeholders’ provision of answers to questions. The persons used may possess the opportunity to influence proceedings, but, may be unable to check results accuracy (Mikkelsen, 2005).

**Functional participation:** This involves the collaboration of identified groups who are externally initiated and identified with achieving predetermined objectives (Mikkelson, 1995). This is what Haskell (2003) refers to as “participative, associative or functional democracy”. The use of interactive participation enables the involvement of persons in analysis and action plans development. In this instance, participation is regarded as a right and not a mechanical function (Mikkelsen, 2005).

**Participation through the provision of lands and labour:** In situations where persons are allowed to participate by providing their lands and labour for incentives of pecuniary gain, food or other benefits, they may be devoid of will-power to proceed as soon as the incentives are exhausted.

**Participation by empowerment of stakeholders:** Participation may also be based on empowerment of stakeholders possessing capacity and willingness to initiate processes and partake in the analysis, so that, joint decision-making evolves (Haskell, 2003). This involves the empowerment of people, in which capacity for development is mobilized. They subsequently metamorphose into active actors instead of passivity. They are able to manage their resources
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(however scarce), make decisions and control the activities affecting their essence (Forrester and Swarthing, 2010).

It is discernible in all the forms of participation examined in the foregoing, that the concept entails decision-making, however rudimentary. Principally, it involves community members’ identification of needs and the accruing challenges. The focus of this study is directed at the last category of participation. This is because, the form reflects persons affected by inaccessible potable water, who are nevertheless, enabled to take charge of their environment through empowerment. Thus, they are wholly involved in the discussions, planning, implementation and evaluation of water projects.

Participation has been adjudged to be “the process by which stakeholders influence and share control over priority setting, policy making, resource allocation and program implementations” (World Bank, 1998). A relevant aspect of governance is the participation of non-state actors in decision-making processes (Bache and Flinders, 2005), in which a stronger decentralization in implementation of policy emerges (Jordan, 2002).

Participation may also be identified as a Right. Users of natural resources possess the right to chart avenues ensuring more sustainable development processes, in which project outcomes are better targeted, based on local requirements (UNDP, 2005). Thus, inadequate participation may imply ineffectively executed projects (Mansuri and Rao, 2004). This identifies the concept as an essential ingredient for globally acclaimed developments. Global environmental protection and sustainability canvassers have, thus, consciously promoted the emergence of literature on public participation and its theories, by which deliberative democracy may be practiced (Meadowscroft, 2004; Anderson and Ostrom, 2008). These theories signify a paradigm
shift from government to governance (Ansell and Gash, 2008). They refer to different forms of democratic participation and the willingness of participants to relate their preferences on new information and claims, made by fellow participants (Chambers, 2003; Razzaque, 2008).

Participation as a transformative entity (Cornwall, 2004), may create new opportunities for public involvement (Fischer, 2000; Heller, 2001; Fung and Wright, 2001; Goetz and Gaventa, 2001). Thus, over the years, participation has become the medium, by which the public is invited to join statutory institutions and other stakeholders in deliberations over the allocations of resources. This brings up the argument that, participation may enable a shift from centralized to decentralized natural resource management approaches. This signifies a shift from externally orchestrated direct forms of democratic inclusion to representative forms of democracy (Ribot, 2002).

Contextually, participation under elected rural community members in water management signifies a move from ad hoc techniques (Dahl, 1989). Thus, a more institutionalized, easily replicated and potentially more sustainable forms of localized and democratized participation, may, evolve. Deliberative decentralization processes can thus, lay foundations for more institutionalized forms, where there is the right to disagree with decisions arrived at and the questioning of managers’ institutional functionality (Dahl, 1989). It involves the common good anchored on plurality of opinion, referring to practices, arrangements, institutions and processes- promoting and encouraging citizens’ well-being, respect for institutions and fostering good governance in water sector (Louka, 2008).
4.8 PARTICIPATION AND INTERNATIONAL LAW

Contemporarily, the theme of participation runs through many international conference documents. An example is the report on SD by the Brundtland Commission (WCED) (1987), headed by the Norwegian Prime Minister\textsuperscript{119}. It was instituted under the United Nations sponsorship. The report was consensual that environmental challenges should be addressed through the participation process by businesses, NGOs, local governments, professional bodies, religious organisations, communities and individuals (Auty and Brown, 1997).

At the UN Earth Summit (UNCED, 1992), the concept of participation occupied the front burner in the discussions of sustainability of natural resources. The Summit enshrined public participation by declaring that, environmental issues are best handled with the participation of all concerned citizens at the relevant levels\textsuperscript{120}. The Summit identified the nexus between public participation and information. Thus, at the national level, individuals should have appropriate access to information concerning the environment held by public authorities. This includes information on hazardous materials, activities in the communities and the opportunity to participate in decision-making processes. States should facilitate and encourage public awareness and participation by making information widely available. The provision further extends participation into effective access to judicial and administrative proceedings, including redress and remedy. The International Convention on Water and the Environment (ICWE, 1992) provided for participation that, water resources management should be based on the participatory approach involving planners and policy-makers at all levels\textsuperscript{121}.

\textsuperscript{119} Gro Harlem Brundtland
\textsuperscript{120} Principle 10
\textsuperscript{121} Principle 2
The Aarhus Convention (1998)\textsuperscript{122} was ratified in June 20\textsuperscript{th} 2012. This was perfected by 45 States from the European Union and Central Asia. These States are already applying the theme of participation in their Water Framework Directives\textsuperscript{123}. Information dissemination was the highlight of the convention.

4.9 PARTICIPATION AND THE INTERNATIONAL HUMAN RIGHTS LAW

The import of Human Rights was expressed in the Universal Declaration of Human Rights (1948). It recognised the right to political participation and freedom of assembly, opinion and expression\textsuperscript{124}. The provision was not a legally binding one, unlike the International Covenant on Civil and Political Rights\textsuperscript{125} (Razzaque, 2008). This latter law espoused and expanded the obligations.

Flowing from the foregoing, global concern about the state of potable water and the rights of human beings to access it continued to be a major concern at the series of International protocols. The Mar del Plata Action Plan (1977) provides that, all people have a right to access drinking water in quantity and quality, equal to their basic needs (United Nations Water Conference, 1977). This provision is regardless of the people’s stage of development and socio-economic conditions. Thus, everyone has the right to a standard of living, adequate for the health and wellbeing of oneself and family (Universal Declaration of Human Rights, 1948). The

\textsuperscript{122} The United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters

[Accessed 17 November, 2013]

\textsuperscript{124} Article 19 and 20

\textsuperscript{125} 1966, Article 19 and 25
The theory of good governance

declaration may be seen as the foundation for the provision of General Comment 15, adopted by CESCR (2002).

The UN Earth Summit (1992) declared that, in developing and using water resources, the satisfaction of basic needs and the safeguarding of the ecosystems must be prioritised. By the declaration, the pace was set for pro-active moves, in which the importance of water was given credence, which would result in later years to the declaration that, potable water is a Human Right. The Rio declaration is a watershed for the principle of participation, which recognises that government alone may not be able to effect developments for sustainability (Ping and Noe, 2002).

In November 2002, the Convention for Economic, Social and Cultural Rights (CESCR) adopted General Comment 15 on the Right to Water. The Human Right to water was declared as indispensable for vesting lives with human dignity and a pre-requisite for the realization of other Human Rights. General Comment 15 has been criticised as not legally binding in itself (Razzaque, 2008), however, the treaty it interprets is binding on the states that ratified it (Khalfan, 2005). By defining the right to water as the right of everyone to sufficient, physically accessible and affordable water for personal and domestic use, it gave fillip to the struggle for concretization of the declaration, by the UN General Assembly. In express terms, General Comment 15 provided that:

“The right of individuals and groups to participate in decision-making processes that may affect their exercise of the right to water, must be an integral part of any policy, programme or strategy concerning water. Individuals and groups should be given full and equal access to information concerning water, water services and the environment, held by public authorities or third parties.”

126 Chapter 4.9. paragraph 3
128 Article 11 and 12
The UN conveyed the Convention on the Rights of Persons with Disability in 2006. It provided recognition that disability results from interactions between persons with impairments, attitudinal and environmental barriers, which hinder full and effective participation in society, on equal basis with others. Thus, there is the recognition that persons with disability may, eventually face participatory barriers as equal members of their society.

The positive results of the struggle to declare water as Human Rights, cumulating on the 28th July 2010 declaration of Human Rights to water supply\textsuperscript{129}, have profound implications for global compliance generally and for Nigeria in particular. The UN General Assembly, by majority votes expressly recognised the Human Rights to water and sanitation. It acknowledged that clean drinking water and sanitation are essential to realising all Human Rights. States and international organisations were called upon to provide financial resources, capacity building and technology transfer to assist in particular, the developing nations in the provision of safe, clean, accessible and affordable drinkable water and sanitation (Sultana and Loftus, 2012).

By May 2011, WHO\textsuperscript{130} called on States to ensure that national health strategies are implemented to contribute to the realization of water and sanitation related Millennium Development Goals (MDG), while supporting a progressive realisation of Human Rights to water and sanitation. On 28 September 2011, the UN Human Rights Council passed a new resolution, taking Human Rights to water into a new significance. Practical solutions were offered with regard to implementation of Human Rights to water, by calling on states, to ensure enough financing for sustainable delivery of water (Sultana and Loftus, 2012).

\textsuperscript{129} Resolution A/RES/64/292
\textsuperscript{130} WHO Resolution 64/24.
4.10 PARTICIPATION, HUMAN RIGHTS AND JUSTICE IN POTABLE WATER SUPPLY

Different ideas may fall under the label of ‘just’ or ‘unjust.’ For example, laws, social systems, particular actions, decisions, judgments and imputations (Rawls, 1971). On the other hand, Rights may be regarded as legal, social or ethical principles connoting the freedom of individuals to entitlements (Stanford Encyclopedia of Philosophy, 2005). They are normative rules of the things people are allowed to access or things owed to people within a legal system, social convention or ethical theory (Stanford Encyclopedia of Philosophy, 2005). Human Rights, therefore, connote justice, in which an individual is able to access social amenities, such as potable water, without encumbrances.

The concept of justice defies universal definition. However, people at the fringes of society may have clearer ideas of what it portends. This understanding emanates from perceiving justice as the epicentre of controversies on equitability in the use of natural resources, which includes water supply (Louka, 2008). However, the major concern of justice lies in the basic structure of society, the way major social institutions reflect fundamental rights and duties and the distribution of social amenities (Rawls, 1971). The effects of basic social structures and the institutions managing them may be regarded as the primary concern of justice. A major effect is in-equality, which is presumably inevitable, but which, the principles of social justice must apply to eradicate (Rawls, 1971). Social justice should, therefore, be regarded as providing a standard, whereby the distribution of society’s basic structures may be accessed by community members (Rawls, 1971).
4.11 IMPLICATIONS OF HUMAN RIGHTS TO WATER IN NIGERIA

Resolutions from international protocols on Human Rights to water consist of policy imperatives, which become mandatory on Nigeria. They expose the inherent challenges in practicalizing the universal call for rights to water supply. For example, a right to water is not a right to unlimited quantity of water. Limitations in resource, ecological constraints, economic and political issues are also factors limiting the availability of water supply (Gleick, 1999).

Rights to water supply are contentious in origin and anthropocentric in tenor, yet, the emerging debates may enable more equitable possibilities, even if borne out of collective struggles. Better mechanisms for distributive justice and democratization, may be tenaciously pursued (Ingram, 2008). This may ensure that, the legal instruments, policies/outcomes and institutions for water management would be carefully and critically analysed and evaluated (Langford, 2005). Inherent in policy discussions of rights to water supply are availability, acceptability, appropriateness, affordability and quality, which may be negotiated for and not just assumed (Bell et al., 2009), but they may act as impetus to the concept of SD.

Human Rights to water may raise the issue of actors, policies, mechanisms, scale, politics and exclusions, which are implicated in water struggle (Bell et al., 2009). All the issues result in the re-configuration of the rights to water and highlight the importance of the legal framework to water and the governance structure. The ensuing debates may bring the following questions to the forefront: Who gets water? Who may not get water? How can water become accessible? By what mechanism can it become accessible? (Tortajada, 2010). A further emerging question is- Can the accessibility of water be made possible by only enactments of laws, regulations and policy formulation?
In recognising the rights to water, a greater awareness for accountability from the relevant authorities for political and legal interpretations may emerge. This may enable those denied opportunities, to contest omissions or commissions. The rights to water is capable of fostering relationships between states, citizens, actors and parties, such as the NGOs, grassroots movements and other organisations. This may derive from social struggles for translating moral arguments over rights to water into concretized claims (Keck and Sikkink, 1998). Thus, questions on the utilisation of obsolete approaches and infrastructure, rescission and inflated water contracts, directed at institutional management of potable water may be encouraged. This includes questioning proposals on contemporaneous approaches and equipment. Existing scholarship regarding water governance and struggle may thus, positively influence further researches. Researchers have argued that, debates on water rights may also produce human ability to re-make the world into just and democratic ways (Bigas, 2012). It may promote activism, egalitarianism and a just water future (Bakker, 2010; Sultana and Loftus, 2012).

4.12 CONTEXTUALIZING JUSTICIABILITY OF HUMAN RIGHTS TO WATER IN NIGERIA

Potable water is the “new oil” and its access and resulting sanitation is an in-alienable right, without which human life may be unsustainable (The Human Rights Commission, 2008). The statement implies that, a constitution should provide for this right. However, there is no express constitutional provision on the Human Rights to water in Nigeria. The CFRN provides for the Fundamental Human Rights guaranteeing the Right to Life\textsuperscript{131}. A school of thought has argued that the provision impliedly, supports the rights to water when read in conjunction with Section

\textsuperscript{131} Section 33 (1)
20. The argument is that, Sections 20, 33 (1)\textsuperscript{132}, 34 (1)\textsuperscript{133} confirm a right to a healthy environment, which impliedly, may be interpreted as a right to water. Upon litigation, however, Court of Laws’ demands drive beyond mere rhetoric unto firmer foundations of law. In \textit{Gani Fawehinmi v Abacha}\textsuperscript{134}, the Court of Appeal declared that, once Rights have been enacted into Nigeria national law, they become superior to decrees. The African Charter on Human and People’s Rights (Ratification and Enforcement) Act, 2004\textsuperscript{135} provides that, the right to a satisfactory environment for development is ‘Human Rights’. The Court, held that, the Article may be relied upon by Nigerians in the enforcement of environmental right, instead of reliance on Section 20\textsuperscript{136}, which is non-justiciable, with reference to constitutional provision of section 6 (6) (c)\textsuperscript{137}.

A relevant question is- if it is accepted that Nigerians have a justiciable right to water by implication of the provision of an international convention, to what extent has the nation made water available for its citizens? The provision of CESCR (2002)\textsuperscript{138} makes it obligatory for States to provide the institutional, economic and social environment necessary to help individuals realise those rights. States should provide for basic water needs when individuals, due to certain reasons beyond their control (for instance, in flooding, or other natural disasters) are unable to meet the basic needs (Gleick, 1999).

A cardinal lesson from the emergence of Human Rights to water is the ability for innovation and participation, influenced by potable water challenges. However, the expression of these may

\textsuperscript{132} Chapter IV Fundamental Rights
\textsuperscript{133} Ibid.
\textsuperscript{134} [1996] 9 NWLR part 475, p. 710
\textsuperscript{135} (Cap A9, Laws of the Federation of Nigeria) Article 24
\textsuperscript{136} CFRN 1999
\textsuperscript{137} Ibid Part II
\textsuperscript{138} Article 2 (1)
depend on effective functionality of powers, in which roles are played. For example, the
government, civil society, corporate organisations and individuals in the communities, who, as
stakeholders are in need of potable water or may influence the supply and sustainability.

4.12.1 Government’s Role in Human Rights to Water

Water as a fundamental human need, is a basic human right. This implies that, when unavailable
or contaminated, the physical and social health of citizens may be jeopardised. Human Rights
to water indicate five elements- availability, accessibility, appropriateness, affordability and
quality (CESCR, 2003). These elements are inherent in discussions, planning, formulation,
implementation and evaluation of water policies. They are impetus to Human Rights’ water
demand and exemplified in International Laws (Appendix 4). The issues raised in the elements
may not be assumed, but negotiated for (Sultana and Loftus, 2010). However, the onus of
provision of water, in which all the elements are present and without any discriminations rests
on the government (CESCR, 2003). Government should take necessary steps, in ensuring
accessibility of citizens to potable water (Khalfan, 2005). Concretised plans of action are
therefore, relevant in achieving the goal. Apart from the foregoing, the right to water imposes
three obligations, which should be evident in water policy documents and discussed in the
following paragraphs:

Respect: This requires that government should refrain from interference, either directly or
indirectly with the enjoyment of the right to potable water supply (CESCR, 2003). An example
of interference could be, the disconnection of water supply, even when it is evident that a
community member genuinely lacks water payment capacity (Khalfan, 2005). A State has an

[139 General Comment No. 15, paragraph 21]
obligation not to destroy community members’ access to potable water by state owned companies’ polluting activities, which destroy sources of potable water.

**Protect:** This is a requirement that countries should prevent third parties like the corporate organisations from interfering in any way with the enjoyment of the right to water supply (CESCR, 2003)\(^{140}\). Examples of this requirement are the prevention of polluting activities by corporate organisations and the prevention of price increase by them (Khalfan, 2005).

**Fulfil:** This implies that citizen’s aspirations to access potable water should be identified by government in adopting necessary measures, with available resources, which may lead to achieving full realization of the right to potable water (CESCR, 2003)\(^{141}\). For examples, government may pursue actions by legislations, effective monitoring and pricing policies and programs, capable of expanding access to potable water (Khalfan, 2005). Thus, the government should recognise the right to water supply and implement it in the laws and policies (Gorsboth and Wolf, 2008).

Those most affected by unavailability of potable water supply are the rural communities’ poor (WHO/UNICEF, 2004). They are less likely to have access to potable water and less likely to provide economic and human resources to manage the impact of deprivation (WHO/UNICEF, 2005). Majority of them lack the capacity to lobby for water supply with the political hegemony. However, government intervention (though usually delayed), is ameliorative (Merriam-Webster, 2015). Amelioration may, however, not be tainted by violations of Human Rights to water supply by government. For example, government may breach its obligations by not

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\(^{140}\) Paragraph 23
\(^{141}\) Ibid. paragraph 34
checking to confirm availability of sufficient quantity of water supply to citizens. This indicates the relevance of providing a water source, such as boreholes (WHO/UNICEF, 2004). There should be no restriction of the amount of clean water that is good enough for drinking and other personal hygiene (Akpor and Muchie, 2011). There should be no disconnection of water for any reasons, even when people are unable to pay. Physical accessibility of water implies that, water should be within physical reach at the water users’ home, school and at work. Community members should not spend more than 30 minutes to access water supply and this should be done without any form of harassment, so that safety of users is assured (Gorsboth and Wolf, 2008). Economic accessibility of water indicates that water should be affordable, so that water rate is not too high and there are no hidden costs. The quality of water is a necessary issue. Thus, the water source should be protected against contamination and be regularly maintained. While quality is under control, there should be safe storage system, if there is no continuous flow. Acceptability of water is not a negotiable issue- users should, therefore, find the water good, usable and not complain about the smell or appearance.

Amelioration of water challenges also indicates non-discrimination, provided in the Constitution of the Federal Republic of Nigeria 1999142. There should be no denial of usage for a particular group, while special attention should be accorded vulnerable community members143. It means that, there should be participation (Gorsboth and Wolf, 2008). Community Members should be heard before decisions are taken and implemented. This complements constitutional provision on fair hearing144 when members are involved in litigable issues. This would also involve access to information. State authority has a duty to provide regular and adequate information about

142 Chapter IV, Fundamental Rights, Sections 42 (1) and 42 (2)
143 Ibid, Section 42 (2)
144 Ibid. Section 36 (1)
water supply, while accountability and Rule of Law would be needed as important elements of governance. Thus, the community members, whose rights have been breached, must be able to avail themselves of legal redress, if they so desire.

4.12.2 Individuals’ Role in Human Rights to Water

Individuals may not be precluded from performing their roles, to ensure the establishment of Human Rights to water, within the rural community. A major reason advanced is that, water has capacity to reflect and pinpoint the identity of a group of people (Ruru, 2012). Community members may, therefore, play individual and collective crucial roles even though, they are un-acknowledged (Clark, 2012). This may be adduced to nonchalance and apathy trailing the supply of potable water in Nigeria. However, in encouraging individuals’ customary participatory ethos, capacity for utilising latent abilities may evolve. Practices, which reflect Human Rights but had remained dormant may be re-activated when individuals exercise right of participation in matters of wellbeing (International Law Association, 2004). Potable water as a major influence in people’s lives also reflects a gradual acceptance of people’s right to participate in decisions. Thus, individuals are able to chart a path to fulfilling those rights to basic amenities, such as potable water (International Law Association, 2004).

Women’s Role in Human Rights to Water: Increasingly, women are identified as agents of change, capable of promoting life-changing social transformations, which may affect community members, water supply and the management (Sen, 1999). Women are regarded as domestic managers, who decide suitable sources of water collection, storage, management and usage (Sijbesma, 1987). In performing these, women may also consider certain criteria. For example, price, time, effort, taste and uses of the particular source of water (Stockholm International Water Institute, 2005). Decisions made by them are therefore, usually weighty and their
inclusion in decision-making may likely affect the socio-economic benefits accruing from water projects, as well as financial viability (Sijbesma, 1987). Writers have argued that, since women are more faced with sectoral challenges, they may be a driving force in the management (Sijbesma, 1987). For example, issues on installation, maintenance and monitoring of infrastructure (Sijbesma, 1987). They may also be capable of reflecting proven accountability when vested with responsibilities. The exercise of commitment to good water supply and collective unity of purpose are indications of the ease, with which they form women organisations (Sijbesma, 1985). It is therefore, considered important that the handling and decisions affecting water resources may have considerable implications for women since, they are habitual users of potable water (Rydhagen, 2002). For example, they may influence the sustainability of water through conservation methods, effective domestic use and management (Rydhagen, 2002). However, they may generally, be constrained in useful contributions, since they are often excluded in planning, decision-making, implementation and evaluation of water projects (Rodda, 1993). This may be attributed to male social dominance, encouraged by social identification of patriarchy as structuring environment-society’s relationships (Cudworth, 2003). Thus, nurturance, reproduction, mundane daily activities, which distinguish women as subordinated to male domination (Plumwood, 1993), may have fostered their relegation to the background of community affairs dominated usually, by the male gender (Cudworth, 2003).

Nigeria rural community women, play major roles in utilising potable water for agricultural purposes, such as planting, processing and marketing, although they may be regarded as the poorer gender of the socio-economic ladder (Nwankwoala, 2011). Their access to potable water may be low in considering the responsibilities of collecting, transporting, storing and usage for domestic matters. Women may also be more at risk of physical attacks- such as, sexual assault, in their quest for potable water, far away from their homes (Cleaver, 1993). It was thus,
suggested that time spent for potable water search may be better spent for enduring purposes—such as formal schooling, trading and skill acquisition (Cleaver, 1993). However, this may only be effective when potable water supply is sustainably managed, so that, the burden of scarcity and inadequacy is removed from them.

In Nigeria, the role of women in potable water supply may have been under-reported in the past and thus, scantly. The reason may be attributed to difficulties in measuring their input in water supply because, their work is multi-faceted, private and usually, voluntary (Sangodoyin, 1993). Thus, the rural woman’s potentials may not have been fully harnessed for potable water supply and management. This limitation may be attributed to socio-cultural discriminatory practices, in which women are subjected to gender discrimination in every aspect of socio-political developments and relegated to the background of community affairs. However, their latent capacities may be supported by systematic training schedules to carry out community development in water supply. Example may be cited in Thailand, where half of the trainee health workers are of the female gender (Sijbesma, 1987).

International Conventions recognise the premium role played by the female gender. An example is the International Convention for Water and the Environment (1992), which provides that “women play a central role in the provision and management of water”\(^1\). The Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) (1979)\(^2\) provides that—

> “Parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure on a basis of equality of men and women, that they participate in and benefit from rural development and in particular, shall ensure to such women, the right to enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communication”

\(^1\) Principle 3
\(^2\) Article 14 (2)
The Role of the Physically Challenged in Human Rights to Water: The number of persons with disabilities is increasing because of a steadily ageing population and the impact of socio-political conflicts (Metts, 2004). Globally, physically challenged persons exist in all communities, where about 70-80% of them live in rural communities, from the low income group (Miles, 1999). Discrimination against the physically challenged is a continuing process, since they are generally excluded from social services and ignored in development programs (UN, 2002). Most of them struggle for social amenities, such as potable water supply, while other people’s respect for their Human Rights to life may be low (Jones et al., 2002). This may be adduced to a mis-information that they are abnormal (Miles, 1995). However, Human Rights activists have debunked such insinuations by arguing that, a Human Rights approach and a social model of disability would be preferable to the medical claims of disability and a resulting cure by integrating them into normal society (Editor, 1993).

Elwan (1999) has posited that, poverty is a cause and consequence of disability. Flowing from this, is the argument that, persons with disabilities are more likely to be exposed to dirty drinking water, borne out of lack of information (Elwan, 1999). They may suffer from limitations excluding them from participating in activities. This may be due to the creation of environmental, social and attitudinal external barriers (Craddock and McCormack, 2000). Thus, in finding it difficult to access potable water sources, transporting water supply may also be challenging. Limitations may be compounded when the physically challenged live in underdeveloped, isolated and inaccessible rural communities (Craddock and McCormack, 2000).

In the rural communities of Nigeria, disability hardly attracts sympathy, due to traditional belief of generational curses or ascribing reason of disability on the afflicted persons (Longshaw,
1997). However, based on contemporaneous arguments, disability is no excuse for exclusion in participatory activities and decision-making, which may enable effective potable water supply in rural communities (Andrich and Besio, 2002). This has the support of the 1999 Constitution of the Federal Republic of Nigeria147, while the Convention on the Right of Persons with Disability and Optional Protocol (2008) also protects persons with disability148. These provisions reflect on potable water supply and the right of access and participation. Thus, physically challenged persons may be provided educational opportunities to create capacity for information gathering, so that, they may demand for their rights and be responsible in tackling potable water sector challenges (Andrich and Besio, 2002).

4.12.3 Corporate Organisations’ Role in Human Rights to Water

Globally, there is increasing awareness that corporate organisations’ water practices are not devoid of environmental impacts (Hall and Lobina, 2012). Attention has therefore, been focused on understanding how these practices may reflect on Human Rights (Mai-lan et al., 2015). In addressing this, the UN (2008) endorsed the ‘protect’, ‘respect’ and ‘remedy’ Framework for Business and Human Rights in the Guidance Document in 2015. It gave recognition, that states have a duty under International Human Rights Law to protect everybody within their jurisdiction from Human Rights abuse committed by enterprises. This ensures that states should have laws and regulations to prevent and address business related Human Rights abuses and ensure access to effective remedies for infringements. In elucidating this responsibility, the UN mandated the provision of a Guidance Document (The CEO Water Mandate, 2015), which provides direction for companies to respect Human Rights for water (Mai-lan et al., 2015).

147 Sections (33 (1), 34 (1) and 39 (1)
148 Articles 3 (d), 3 (e) and 3 (f)
Guidance Document\textsuperscript{149} enables corporate organisations to translate their responsibility to respect Human Rights and sanitation into their existing water management policies, processes and culture. They are also expected to complement related efforts, to clarify obligations of other actors, with regard to Human Rights for water and sanitation.

The Guidance Document (2015) provides that a corporate organisation should develop a policy commitment, which should define and reflect its responsibility to respect Human Rights to water and sanitation throughout its operational period. The commitment should set out a value chain (for its staff, business partners and others) of the company’s expectations, about preventing and addressing impacts on Human Rights to water and sanitation. By the document, a corporate organisation should engage its internal colleagues’ involvement in developing or reviewing company policy commitment on Human Rights to water and sanitation. The advantage in this, is the building of understanding and ownership of the policy commitment, which may increase the likelihood of implementation. Furthermore, key stakeholders should be engaged to test the policy commitment. This should enable the organisations’ understanding of how the policy may likely be seen by the groups, potentially affected stakeholders or their representatives, who should not be left out of the process. Respect for Human Rights to water should be embedded in the organisations’ policies. This should be made possible when appropriate internal accountability structure is established to enable action in the policy commitment. It is necessary that large organisations should give particular attention to the coordination of relevant functions, in order to embed a policy commitment that may enable Human Rights impacts. Thus, the expectations for policy commitment should be reflected in the performance incentives, guidance and training. Taking into consideration the enormity of

\textsuperscript{149}Submitted at the UN Water 2015 Annual International Zaragoza Conference on Water and Sustainable Development titled “From Vision to Action”
responsibility to water stakeholders, a corporate organisation should set clear expectations about respect for the Human Rights to water and sanitation, right from the onset of business. This is capable of laying firm foundations for effective actions, which may prevent and address impacts throughout the relationship with the stakeholders.

The Guidance Document (2015) requires that a corporate organisation should assess impacts on Human Rights for water by a clear understanding of who may be impacted by the company’s activities. Thus, attention should be focused on the marginalized and vulnerable stakeholders. A review is considered necessary to identify how the company may be involved in an impact, while considering impacts arising through business relationships and engagement with stakeholders in assessing the impacts. Thus, priority should be given to impacts where required, by evaluating the severity of impacts in affected stakeholders and by evaluating likelihood of impacts occurring or re-occurring.

A corporate organisation should build a systematic approach to assessment by reviewing and building on existing systems, in paying particular attention to cumulative impacts on the Human Rights to water and sanitation. To succeed in this, integration and action-taking on impacts on the Human Rights to water are necessary. This may be achieved by identifying options to prevent or mitigate potential impacts; by building and using leverage in business relationships; by focusing on addressing supply chain impacts; and by focusing on relationships with state authorities.

Tracking and communicating performance is necessary for performance. This may be achieved by building a systematic approach to tracking; by reviewing existing tracking systems; tracking efforts through business relations by developing appropriate indicators. To achieve this, a
company needs qualitative and quantitative indicators to track and interpret information in its efforts to respect Human Rights to water, while stakeholders should also be engaged in tracking. It is thus, necessary to review and improve communication with affected stakeholders and to improve formal reporting on severe impacts on Human Rights to water.

The Guidance Document (2015) recommends remediation and grievance mechanisms to be established as appropriate process of remedy provision, while understanding the responsibility of remediating negative impacts. Thus, external grievance mechanisms and their effectiveness should be mapped. A design for effective operational grievance mechanisms should therefore, be undertaken to understand what makes a grievance mechanism effective. This should be reviewed, while building on an existing internal mechanism, which defines the scope of the grievance mechanism.

The foregoing discussion pertains to the expectations of what corporate organisations should reflect in their respect for Human Rights to potable water at the international level and may be applicable to Nigeria. The Guidance Document is nascent and may be subject to further reviews, although it has not been domesticated in Nigeria. It may however, be regarded as watershed for relationship between a host community, the organisation and the encouragement fostered for the actualization of participation.

4.12.4 NGOs Role in Human Rights to Water

The Human Rights framework places the primary responsibilities for achieving Human Rights on the State. However, NGOs have continued to play significant roles in environmental protection through interventionism by advocacy (Coulby et al., 2015). The approach may be explored in achieving widespread sustainable change, which may impact strongly on the grassroots (Smout,
1996). NGOs may advocate for sustainability and defense of community programs from adverse policy changes (International NGO Training and Research Center, 2008). Thus, people view NGOs as trustworthy, based on their identity as persons who understand the needs of others and render necessary assistance (Narayan and Petesch, 2008).

NGOs’ attempts at engaging in Human Rights protection may vary according to particular objectives. Thus, contextually, they may render services directly to protect potable water supply as a socio-economic right (Smout, 1996). By providing humanitarian assistance, skill acquisition training and legal advocacy or advice on legal claims, NGOs may protect victims of social injustice (Council of Europe, 2015). Collected relevant information promotes transparency and accountability, which may be used by NGOs to address injustice and hold government accountable (Willetts, 1996). Such information may subsequently be divulged to the public (Council of Europe, 2015). By putting pressure on governments, NGOs address contentious issues, condemn injustice perpetuated against communities, groups or individuals and thus, appeal to people’s sense of justice (Hilton et al., 2013).

In embarking on campaigns and advocacy to effect policy change, NGOs may explore the technique of letter-writing campaign, in which a government or an individual may be presented with a deluge of letters from several NGO members’ world-wide (Coulby et al., 2015). The approach is regularly used by notable NGOs, such as the Amnesty International (Coulby et al., 2015). By using street action or demonstration, NGOs facilitate media assistance for coverage to embarrass a government into doing justice to an issue (Council of Europe, 2015). Another approach used by NGOs is lobbying, in which social media assistance is enlisted to press for resolutions to worrisome issues (International NGO Training and Research Center, 2008). Shadow reports may be presented to the UN Human Rights monitoring groups to provide
unbiased perspectives of real world situation on issues of Human Rights violation in the supply of water (Council of Europe, 2015). The provision of education and awareness as a technique, may involve public awareness campaigns by NGOs (International NGO Training and Research Center, 2008). For example, campaign on the need to use only pipe-borne treated water, rather than reliance on polluted water supply from surface and ground water sources. Another relevant technique is ‘The Most Significant Change Technique- Evaluation and monitoring,’ which may be used to indicate the most significant change for complex interventions (Davis and Dart, 2005; Willets and Crawford, 2007). The technique is a qualitative approach for monitoring and evaluation, consisting of stories and feedback on the change envisaged (Major and Swaffield, 2014).

4.13 PARTICIPATION AND WATER RESOURCES IN RURAL COMMUNITIES

To empower rural community users of potable water by participation, indicates actual power shift to them (Cornwall and Gaventa, 2001). This enhances the exercise of their traditional rights, which are not based on approval granted by their rulers or leaders (Linebaugh, 2008). The assertion may be attributed to the existence of common customs, distinguished as factual rights, referred to by De-Angelis (2010) as ‘de facto rights’. For example, participation in Nigeria rural communities, is the silent principle of operationalizing most community affairs. Sanctions under Customary Law are traditionally enforced with the collaboration of cohort, peer, family enclave and trade group (Elias, 1956). This has proved quite illuminating in the effect of participation at the rural community level.
4.14 CONTEXTUALIZATION OF PARTICIPATION IN NIGERIA

The 1999 CFRN provides for the relevance of participation in the lives of the citizens\(^{150}\) (Chapter 4.3.4). The instrument also provides expressly that treaties may have the force of law under domestication by legislative instruments. Thus, UNCED (1992)\(^{151}\), Aarhus Convention (1998)\(^{152}\), United Nations Economic Commission for Europe (UNECE) and other international instruments (Chapters 4.8 and 4.9) expressly provide for the concept of participation, which some Nigeria environmental laws have adopted. The Environmental Impact Assessment Act 1992\(^{153}\), National Policy on Environment\(^{154}\) and the National Water Supply and Sanitation Policy exemplify it. However, the reality on ground is that, it is mere rhetoric, as potable water management is a top-down structure, in which most non-state actors are precluded from water governance in Nigeria (Eneh, 2011). Thus, non-implementation of participation is a departure from the benefits of a globally recognized environmental governance tool. The implication is that, the water sector has been declared in-efficient and in-effective in non-inclusion (Anukam, 1997; Ladan, 2004; Orubu, 2006; Ikoni, 2010; Eneh, and Agbazue, 2011). Lack of participation of users of potable water supply has thus, resulted in management gaps in the sector (Chapter 4.3).

4.15 THEORY OF PARTICIPATORY WATER GOVERNANCE

Water governance is identified as the range of social, economic and administrative systems that are in place to develop and manage water resources and the delivery of water services at different levels of society (Rogers and Hall, 2003). From the definition, argument for implications may be three-dimensional. Foremost is that PWG is emergent from the concept of participation.

\(^{150}\) Fundamental Objectives and Directive Principles of State Policy, Section 14 (2) (c) \\
\(^{151}\) The Rio Declaration on Environment and Development (1992), Principle 10 \\
\(^{152}\) The Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters \\
\(^{153}\) Section 7 \\
\(^{154}\) Section 6.6
Secondly, PWG is ameliorative and transformative on potable water supply management failure (Bakker, 2003). Thirdly, water governance may also serve as added value to the water sector, resulting from a congregation of accruing benefits (Chapter 4.16). In the three implications, the imperative of collaboration between state and non-state actors is required for effective planning and implementation of PWG. This aspect is later given prominence in the study (Chapter 5.3).

The fundamental function of water governance systems is the determination of who gets water supply? When? How will the water supply be accessed? Who has the right to access the water and related services and benefits? (Loftus and Sultana, 2011). Participatory process in potable water governance is, thus, recognized as a result of the importance of the resource and the implication of its scarcity in socio-economic development (Bakker, 2003). The effective management of potable water is therefore, foremost in the theory of water resources (Sekler, et al., 1999). However, since science-based environmental policy implementation and management created doubts in the water sector (Irwin, 1995), the need to search for new structures in water governance has emerged (Sultana and Loftus, 2012). Thus, the evolvement of PWG is a major reaction to water managers’ response about international paradigm shift in water resource management (Gash et al., 1999). Thus, a marked distinction between government top-down systems from top-down/bottom-up governance approach, is considered important for the effectiveness of potable water management (Gash et al., 1999).

Arising from potable water management challenges, institutional changes, defined as part of a wider shift from government to governance, are gradually emerging as new water related institutional bodies and actors (Swyngedouw, 2000). They involve policy-making and strategic
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planning and implementation. For example, PWG has been successfully explored in the Fens Flood plain project in East of England (Oates, 2002), Northern Thailand (Heyd and Neef, 2004), Ghana (Harris, 2013) and the Republic of South Africa (Clark, 2012). It has also been explored in Afghanistan since 2005 (Thomas, 2012). In that country, three models— the Integrated Water Resources Management (IWRM), River Basin Management (RBM) and the participation in decentralization decision-making, via the Multi Stake-holder Platforms (MSPs) were imported from the western world (Thomas, 2012). They were impacted into their water laws. Thus, these governance forms are exemplary for Nigeria’s water sector management reforms.

Three factors have been advanced for global incursion into PWG (Solanes and Jouraviev, 2006). The major rationality in this study is the need to carry out water management reform (Figure 4.2). This study is anchored on the advocacy for a restructuring for the purpose of improving performance in potable water management. Thus, the required manifestation is a change in incentive structures (such as the process of democratization), management norms (such as the exploration of cultural ethos) and a robust relationship between the utility and government (such as the active use of information), in conjunction with a wide spectrum of stakeholders (Bakker, 2003).

Figure 4.2: Rationale for potable water management restructuring
4.16 POTENTIALS OF PARTICIPATORY PROCESS IN POTABLE WATER GOVERNANCE

Globally, participation is recognized as contributive in diverse ways to environmental protection (Aycrigg, 1998). This results from creating and conferring the right to agree or disagree with decisions and the ability to also inquire into institutional management functionality (Newig, 2007). An emerging participatory governance may, therefore, be an asset in Nigeria potable water management, since participation in rural communal affairs is a part of the dynamics of existence. Thus, the incorporation of locally held knowledge may enable participation, which should improve quality of decisions, encourage institutionalized transparency and more creative decision-making capabilities (Bakker, 2003). This may enable speedy decision-making, minimize likelihood of mis-understanding and encourage less litigation, due to arbitration of disputes (Snyder, 2006). Since local knowledge is imbued with the capacity to create self-organisation, it also ensures social control, enforcement and compliance to rules (Hickey and Mohan, 2004).

Effective implementation of water projects and environmental quality may emerge from these (Sabatier et al., 2005).

Participatory governance engenders legitimacy to broaden stakeholders’ outlook, through involvement in new forms of actions and interests (Glyn, 2004). By providing opportunities for greater empowerment and access to other stakeholders, effective policy outcomes, which are improvements from government based management, may ensue from the process of participation (Dietz and Stern, 2008). This is capable of providing opportunities for improved continuing education and information, while new governance arrangements may broaden representation (Pellizoni, 2003).

The contributions of the concept of participation in changing the platform for good governance notwithstanding, it has attracted numerous views and experiences on the most successful
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direction, in which it may be actionable. An unwitting contest on participation as a concept has overtaken the research arena (Sneddon and Fox, 2007). Participation has therefore, come under severe criticisms, which may paradoxically, act as fillip to its development. These are discussed in the following section.

4.17 IMPACTS AND CONSTRAINTS OF PARTICIPATORY PROCESS IN POTABLE WATER GOVERNANCE

Some writers have expressed adverse opinion rejecting the acclaimed potentials of participatory process. An amalgam of the writers criticised participation as a tyrannical concept, capable of creating social injustice and illegitimacy of the exercise of power (Cooke and Kothari, 2001). However, in seeking to associate the concept with developmental trends, Hickey and Mohan (2004) proposed rigorous and critical insight of the essence of the concept as a transformational entity. This may be achieved by delving into a conceptual ideological examination of participation theory, methods and practises. Thus, there is an indication that participatory process may be regarded as a continuum, necessary for envisaged developmental strides being canvassed, for the totality of ecosystem development (Hickey and Mohan, 2004).

In view of this, academics have taken up the challenge of promoting the potentials of participatory process as a genuine transformational approach, imbued with capacity to engender the trust of those involved in it (Gaventa, 2004; Fung and Wright, 2003). One of the ways of achieving this, is, the encouragement of transparency in democratic practice. Thus, rural community members are empowered to participate in decision-making, express views independent of coercion by the top echelon of the community and irrespective of gender or geographical boundaries (Meadowcroft, 2002).

Some other critics base their views on insufficiently marshalled arguments to justify the acclaimed potentials (Newig and Fritsch, 2009). This may have weakened the arguments for the
process. However, proponents have stated that one of the key potentials of participatory process is the optimum exploration of local knowledge for potable water management (Hickey and Mohan, 2004). Antagonistic arguments are strengthened by citing the dominating influence of some influential local actors, who may hold the view that, environmental challenges are more successfully tackled at the higher levels of governance (Meadowcroft, 2002). This is particularly so, when local decisions are to be taken at the expense of third parties (Meadowcroft, 2002). In this regard, prominent reliable people, playing active advocacy role for participatory process, may be in the minority, compared to those having the capacity and resources to make their voices heard (Sunstein, 2003). Thus, paradoxically, in seeking to decentralize governance, exclusion from participatory activities may result, when participants attend meetings without contributing effectively. This is capable of tyrannical power dynamics entrenchment and marginalization of vulnerable community members (Cleaver, 2001). Thus, in the scenario, participatory governance may be rejected. In a counter-argument, however, Hickey and Mohan (2004) opined that, participatory process has transcended the level of tyranny to a transformative concept, contrary to the views of proponents of a tyrannical inherence (Cooke and Kothari, 2004). PWG is an improvement on top-down governmental potable water supply management. It may be enhanced by the inclusion and collaboration of state and non-state actors, who plan, develop and implement the structure. It may also be explored in maintaining, monitoring, securing and evaluating the infrastructure to ensure effective sustainable governance. The representation of diverse interests in potable water decision-making and the role of politics are salient in addressing governance dynamics. This is a reflection of the reality that water connotes power (Ohlsson, 1995; UN/IFAD, 2006). Thus, the people who control the flow of water are capable of exercising this transformative power at their disposal, in various ways (Table 4.1).
Participation has excelled at empowering and transforming the lives of marginalised citizens (Hickey and Mohan, 2004), although this may not be devoid of challenges of implementation. However, contemporary array of participatory theories, policies and practice may be identified for ameliorating these challenges. In this regard, reference may also be directed at an argument by Gaventa (2004). The writer argued that, in spite of major challenges and division among proponents who seek improvement in democratic governance for potable water, considerable interest has been paid to participatory processes. This may enable the poor to have a voice in new forms of inclusion. However, this may only succeed when it reflects change, in which the rural poor, desirous of seeing and partaking in forms of governance, are provided good services and inclusion, which may promote justice and equitability (Fung and Wright, 2001).

Antagonists are of the view that, most literature on participatory process do not consider environmental impacts sufficiently (Okonkwo, 2010). This criticism may have reference in the enormity of the impact of ecosystem pollution, resulting from industrialization and population explosion (Meadows et al., 1972). The dearth of empirical researches on superiority of collaborative structure, which creates effectiveness of policy (despite numerous publications to that effect) have not provided enough evidence in that regard (Newig, 2007). Thus, in seeking

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**Table 4.1: Impacts of the exercise of power in participatory water governance**

<table>
<thead>
<tr>
<th>IMPACTS OF THE EXERCISE OF POWER IN PARTICIPATORY WATER GOVERNANCE</th>
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<tbody>
<tr>
<td>Beneficial improvements in the potable water supply management (Sabatier et al., 2005)</td>
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<tr>
<td>Legitimization of administrative decision-making, arising from collectiveness of decision and ensuing trust (Hickey and Mohan, 2004)</td>
</tr>
<tr>
<td>Stakeholders’ provision of scarce but necessary information, which reduces cost, creates innovations, while fostering sense of worth (Kaika and Page, 2003)</td>
</tr>
<tr>
<td>Fostering of learning and competency on the dynamics of effective potable water supply (Bakker, 2003)</td>
</tr>
<tr>
<td>Development and harvesting of local knowledge (Bigas, 2012)</td>
</tr>
<tr>
<td>Fostering of unity of purpose in decision-making (Clarke, 2013)</td>
</tr>
<tr>
<td>Encouragement on democratic procedures and provision of inclusionary techniques (Bakker, 2003)</td>
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</tbody>
</table>
to foster transformative participation, more may be achieved by providing adequate information in the public domain on the subject matter. It also requires that rules should be changed- for example, changing the rules on representation and re-branding institutions (Cooke, 2004). Strategies, which may enable participants’ engagement on debates articulating their own perspectives and experiences, are important for a repositioning of participation as a transformative concept (Cornwall, 2000).

The practice of PWG may be fraught with arguments on conflicting interests and values by stakeholders. This is mostly based on management costs and manipulative strategies by powerful institutions (Sunstein, 2003). Antagonists may therefore, cite lack of capacity to participate (Kaika and Page, 2003). This argument has however been debunked- since a key challenge to institutionalising participatory process as a genuine intention, may be the forging of relationship between common persons and institutional bodies (Hickey and Mohan, 2004). This has become necessary, due to the distancing of government institutions, characterised by unaccountability and corruption. However, despite the gaps, poor people are consistent in their desire to be a part of the system under fairer rules (Narayan et al., 2000).

Many forms of participatory processes have emerged with time, but, they reflect the problem of not knowing which decision-making process performs optimally (Koontz and Thomas, 2006). The argument calls for comparative studies advocacy, to identify the efficiency of the various participatory forms. It is only in this can optimal performance be located. For example, some of these processes are the multi-sectoral collaboration, hierarchical planning, command and control regulations or market-based mechanism (Koontz and Thomas, 2006). Internal and external accountability may be lacking in some of the groups interested in participatory democracy (Grant and Keohane, 2005), raising the question on whether they can credibly
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represent public interest (Louka, 2008). This is because, political and legal unaccountability may result from inequality in partnership, creating uneven distribution of costs and benefits of a participatory policy (Heinelt et al., 1999). It is agreed that this is inimical to the requirement of the participatory process, in which there is provision of avenues for hearing diverse voices and the strengthening of the capacity to question institutional breach of rules, such as accountability. However, in view of these criticisms, it is necessary that processes strengthening citizens’ active engagement be identified and democratically institutionalised (Cornwall, 2000).

Participation may be manipulatively used by influential persons in responsibility sharing, aimed at pacifying some persons (Arnstein, 1969). This is capable of reducing the participatory process to a top-down sequence, which nullifies the original design for the concept. A counter-argument is that, local communities possess latent capacities for determination if there is a question of marginalization, supported by advocacy groups such as NGOs (Coulby et al., 2015).

Further argument could be made that, although PWG is an interventionist structure, covert difficulties and open challenges may arise from various persons, who may regard it as an affront to the ‘status quo’ (Bigas, 2012). Resistance is also envisaged from highly placed community members. They may resist the loss of their privileged positions, while less endowed community members may also resist the concept, because they have grown accustomed to taking orders from different directions (Clarke, 2013). A re-education, re-orientation and justification for transformative strategy are considered relevant in counteracting such constraints. Eyben (2003) suggests going into partnership with local organisations by building on already existing participatory forms. It is however necessary to recognise the hegemonic orientation of local people in which they may have low tolerance for democratised processes. Thus, the recognition of dialogue even with all its complexities is just as important (Eyben, 2003). As a transformative
strategy, the achievement of participatory process in water governance may constitute complexities involving high costs (Stuart, 2003), and create implementation challenges (Platteau, 2008). Thus, barriers may be created for poor and disadvantaged people especially, women lacking adequate time or resources for participating in projects, consultation or decision-making (UNDP, 2006). There is the advocacy that, participatory process should be self-paying, regardless of collaborative activities of agencies, individuals or government (Bakker, 2003). In Nigeria, women have capacity for charting developmental programs, which are evidently sustainable and beneficial. Their ability for formation of different organisational bodies may be attributed to this latent potential.

Arguments for PWG, in which potentials are inhered go beyond geographic and gender boundaries, while also transcending orchestrated difficulties (Eyben, 2003). This is because, globally, the potentials in participatory process may be explored for every facet of environmental management. The impact may however, be more notable in African countries (Hickey and Mohan, 2004), where participation in communal affairs is a local ethos. This is regarded as a starting point for the achievement of PWG (Rogers and Hall, 2003) applicable to the rural communities of Nigeria.

4.18 PARTICIPATORY WATER GOVERNANCE MODELS

The need for exploring new frontiers for water resources management (WRM) may have fostered several governance models for sustainable water supply. This may be resulting from in-efficiency in government institutional management. Thus, the problems requiring urgent reforms reflect technicalities and poor governance, consisting of inefficient service, low investment and revenue (Bakker, 2003). The conclusion is that, a reform is needed in utility
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governance and structure. This is considered important, since communities are no longer ignorant of the enormity of problems facing the water sector.

Examples of water governance strategies are stated in the following sections to reflect the changing tide of potable water supply management. They are not regarded as perfect in orientation, acceptability or implementation. However, they mark a spring-board for the advocacy for participation of the non-state actors of potable water, in fusion with the state-actors. They also indicate the resilience, which participation may foster markedly when stakeholders’ interests are incorporated (Blomquist et al., 2005).

4.18.1 Integrated Water Resource Management (IWRM)

IWRM is a process canvassed by several international organisations, as a framework of international water policy (Conca, 2006) and became institutionalized in the middle of 1970s (Louka, 2008). The Global Water Partnership (GWP) (2000a) identifies it as a process promoting coordinated development, water management, land and related resources, to maximize resultant economic and social welfare equitably, without compromising vital ecosystems sustainability (Calder, 1998). It has been described as a cross-sectoral policy approach, designed for replacing traditional fragmented top-down approach to water resources management. In essence, for a meaningful and effective water management, consideration must be accorded land use planning and management. This is the reality- since pollution of water stems from human activities occurring on land (Louka, 2008). IWRM is, thus, directed at minimizing mis-use of water resources, prevention of water deprivation for some uses and over-endowment for other uses and setting of correct pricing for water, to achieve desired efficiency (Tortajada, 2016).
IWRM process has evolved in Latin American nations, which have established national water authorities. They have partially transferred management of water supply from centralized public sector to private operators and community organisations (Louka, 2008). However, success has been minimal, due to lack of technical support and regulation. Thus, decentralization has been adversely affected (UN Environment Program, 2003). The IWRM has also been introduced to some developing African States—such as Niger, Senegal, Chad and Gambia (Louka, 2008). However, the argument against it in the region is that, it has not been fully maximized, due to weakness in national institutional structures, such as the river basins, pluralistic legal systems and overlapping power centrality (Swatuk, 2005), which leads to weak international arrangements (UN Environment Program, 2003).

The International Conference on Water and the Environment (ICWE) (Dublin Conference) (1992) has been credited with championing the IWRM concept (through experts) in water management. It is also supported by international institutions, such as GWP, World Bank, African Development Bank and numerous others (Mehta et al., 2006). The ICWE principles were exemplified as what should guide the application of the IWRM (Table 4.2).

### Table 4.2: Principles of ICWE (1992)

<table>
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<tr>
<th>No.</th>
<th>ICWE (1992) Principles</th>
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<tbody>
<tr>
<td>1.</td>
<td>Freshwater is a finite and vulnerable resource essential to sustain life, development and environment.</td>
</tr>
<tr>
<td>2.</td>
<td>Water resources management should be based on the participatory approach involving planners and policy-makers at all levels.</td>
</tr>
<tr>
<td>3.</td>
<td>Women play a central role in the provision and management of water.</td>
</tr>
<tr>
<td>4.</td>
<td>Policy making for water management must take place at the most appropriate level.</td>
</tr>
<tr>
<td>5.</td>
<td>Water has an economic value in all its competing uses and should be recognized as economic goods.</td>
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The United Nations Conference on Environment and Development (UNCED, 1992)\(^{155}\) and the World Summit on Sustainable Development (WSSD, 2002), which are inter-governmental

\(^{155}\) The Rio Summit
environmental conferences, attempted exemplifying the IWRM components (Louka, 2008), through Agenda 21 (1992). It provided that IWRM must take place at the level of catchment basin or sub-basin by following some objectives, multi-sectoral approach to water management, public participation in decision-making and the strengthening of institutional, legal and financial mechanisms. At the international level, states must follow existing agreements and arrangements, taking into account the interest of riparian states (Agenda 21, 1992). The theme of the IWRM was adopted by the Johannesburg Plan Implementation (WSSD, 2002), which provided that states should develop IWRM and efficiency plans by 2005. The participatory theme of the IWRM is already being actualized, although the challenges facing the concept have become items for criticism (Table 4.3).

Table 4.3: Criticisms of the Integrated Water Resource Management

<table>
<thead>
<tr>
<th>CRITICISMS OF THE IWRM</th>
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<tbody>
<tr>
<td>Increase in water tariff (Louka, 2008)</td>
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<tr>
<td>Cut-off of services to poor customers (Louka, 2008)</td>
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<tr>
<td>Bribery of government officials (Louka, 2008)</td>
</tr>
<tr>
<td>Fragmentation of water management (Mohile, 2005)</td>
</tr>
<tr>
<td>Irregularity and non-uniformity in management (Durojeanni, 2006)</td>
</tr>
<tr>
<td>The adaptation of the IWRM approach into local planning may not always be feasible because, it fails to consider different types of un-certainties in the system and in the management process (Biswas, 2004; Jeffrey and Glearey, 2004)</td>
</tr>
<tr>
<td>No successful and convincing implementation has been reported yet (Biswas, 2006)</td>
</tr>
<tr>
<td>The ontology of the concept is abstract and thus not clear (Biswas, 2004)</td>
</tr>
<tr>
<td>There is uncertainty in the process of management, system understanding and knowledge (Pahl-Wostl, 2004)</td>
</tr>
<tr>
<td>It lacks scientific basis as there is no empirical reported evidence for the benefits of IWRM (Pahl-Wostl, 2004)</td>
</tr>
</tbody>
</table>

Based on the last criticism of the IWRM, it may be characterized as a normative pragmatic approach, lacking deep scientific basis, which builds on verification and observation (Pahl-Wostl, 2002; Jeffrey and Glearey, 2004). The success rate has, therefore, been adjudged slender in Latin America and weak in Africa.
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Despite the criticisms levelled against IWRM, researchers have credited it with popularizing the integration of upstream and downstream uses of land use planning and water resources management. It has also established coordination between upstream and downstream uses and between land use planning and water resources management. The process is recognized as the precursor of decision-making processes for water management. This is akin to the adoption of the European Union Water Framework Directives\textsuperscript{156}

4.18.2 Adaptive Water Management under Uncertainty (Ne-Water Project)

The European NeWater project is guided by the ideal that, water management should be more technically adaptive, to sustain an integrated and sustainable water resource management. The proponents argue that, based on the perceived in-adequacies in the IWRM, there should be a re-engineering of thoughts in fundamental assumptions and paradigms, which under-pin the management approaches of the IWRM (Pahl-Wostl, 2004). They suggested the expansion of the technical management. It is expected to integrate human aspect, a more adaptive and flexible management to make the IWRM approach operable, under a rapidly changing socio-economic boundary conditions and climate change.

The model is thus, an emergent approach, building upon the perceived insufficiency in the IWRM and not a complete departure from it. It is a refinement based particularly on technical aspects, anchored on the hypothesis that, IWRM cannot succeed unless it transits to a more adaptive water management (Jeffrey and Glearey, 2004). This should be under a scientific analysis, which may develop a conceptual base, characterizing what makes a water

management regime adaptive and what can make the goals of IWRM achievable (Pahl-Wostl, 2004). While the approach is specifically for managing river basins as a multi-disciplinary project, it combines scientific expertise, from natural and environmental sciences and social sciences, with participatory approaches. They are inclusive of practitioners and stakeholders in the water sector, who define the agenda (Pahl-Wostl, 2004).

4.18.3 Integrated Catchment Management Structure (ICM)

The ICM is a process of formulating and implementing a course of action involving natural and human resources in a watershed, taking into account the social, political, economic and institutional factors, operating within the watershed and the surrounding river basin to achieve specific social objectives (UNESCO, 1993). The structure may not be regarded as a new concept, since it has historical antecedent as an integrated traditional resource management (Kienzle et al., 1997; Acquay, 2001). It involves the incorporation of horizontal integration between users and uses. It also consists of a vertical integration between institutions from local to regional, national and international. It seeks for consensus between users and stakeholders on freshwater needs and demands, as against freshwater obligations (Kienzle et al., 1997). Thus, its main focus is the sustainable management of land and water. It therefore provides for sufficient potable water that is fit for usage, in satisfying basic human needs. The ICM supports economic development, while maintaining resource and ecological health quality. Thus, it has the advantages of providing comprehensive, socio-economic, political and environmental framework for land and water management. By focusing on upstream/downstream matters, it attends to matters on land use impacts and food security. In achieving these, the ICM design reduces conflicts, through decisions made by various stakeholders.
In spite of its laudable objectives, the ICM has been adjudged a strategy, which is not easy to embark upon as a result of its failure rate caused by lack of information, collation and dissemination. The design has inherent conflicting policies for water management and sectoralism. Some major criticisms have also been levelled against the ICM. Notably, there is the dearth of government commitment, poor definition of stakeholders’ roles, deficiency in land use change impacts on water quality and lack of donor coordination (Kienzle et al., 1997).

### 4.18.4 Localism Devolution

The Localism Devolution may not be regarded as a typical participatory process for water supply. However, it is a public participation strategy, which may be used in the management of potable water at local community level. It originates from the United Kingdom, based on the Localism Act\(^{157}\). By providing for neighborhood forums, representatives of residents of the community, businesses and public services are included in management issues involving problem solving, decision taking and evaluation of programs. It is a changing policy context, in which opportunities, experiences and challenges are effectively explored (Woolvin, 2013). Birmingham Council explained that it is one of the major ways of involving residents in decision-making on local services and their efficient delivery (Birmingham neighborhood, 2011). The strategy is advantageous in giving communities more power to plan for local development and community happenings. With the localism devolution, councils are able to introduce new competence power, involving any measures taken, apart from specifically legally prohibited ones. Thus, it allows the residents to develop tailor-made solutions to local challenges, which is not devoid of the potential for variations (Walker, 2007). A major disadvantage of the strategy

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\(^{157}\) 2011
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is that, it may cause tension over land, which has likelihood of permanent damage to the local polity. Furthermore, it lacks universal answer for the reconciliation of all claims (Walker, 2007).

4.19 COUNTRIES EXPLORING PARTICIPATORY WATER GOVERNANCE PRACTICE

Several countries have successfully explored the inherent advantages in PWG, which ensures that potable water supply is managed by effective strategies. Examples from Ghana and South Africa in the sub-Saharan African region will be exemplified in the following paragraphs.

Ghana (2004 till date): Water has been difficult to access in Ghana (Dorm-Adzobu and Ampomah, 2006). However, a gradual reform of the sector was embarked upon to introduce among other issues, rural community participation and decentralization of rural water supply, based on districts (Dorm-Adzobu and Ampomah, 2006). Thus, the water reforms were commenced with the formulation of a consolidated national policy, which resulted in the National Water Policy (2007) published in 2008. The document seeks to institutionalize a comprehensive water sector policy. Dorm-Adzobu and Ampomah (2006) have argued that the principle of Fundamental Human Rights is entrenched with the recognition of the importance of meeting social needs for water and ensuring participatory decision-making at different strata of the society.

Ghana water services consist of local water boards, described as ‘citizens associations’, which promote community engagement (Harry and Morinville, 2013). The description is based on the local water board’s adoption of participation as primary objective for achieving access to potable water (Harry and Morinville, 2013). The local water board158 coordinates and facilitates

158 Community Water and Sanitation Agency
implementation of rural communities’ water supply, provides several ways of involving poor community members in decision-making, water accessibility and affordability (Harris and Morinville, 2013). Whittington et al., (2009) declare that, as a result of participatory activities, 90% of rural communities in Ghana have successfully coordinated water system. This may be adduced further to the communities’ election of a balanced gender friendly water and sanitation boards, which include volunteers, such as NGOs, who provide technical assistance and other services (Water-Aid Ghana, 2005). It may be posited that, the key issue supporting the success of Ghana potable water for rural dwellers is participation, in which there is:

Regard for Human Rights in water supply; Promotion of rural community engagement and the involvement of members’ in decision-making processes; Encouragement of voluntary organisations, such as the NGOs in potable water management; The water and sanitation boards are constituted, based on gender friendliness.

**South Africa (1998 till Date):** South Africa has a viable, innovative water industry (Clark, 2012). The assertion may be a reflection on the award by Stockholm Industry Water Award. It is an annual award commencing from 2000, recognising impressive contributions of businesses and industries for improving world water situation, production and innovation, which reduce industrial water consumption and pollution (Stockholm International Water Institute, 2009). It was established in 2004 by Stockholm Water Foundation collaborating with the Royal Swedish Academy of Engineering Sciences and the World Business Council of Sustainable Development for “transformative and inclusive approach”. South Africa epitomizes the centrality of community participation to the actualization of the right to water (Clark, 2012). One of the reasons ascribed for this, lies in the provision of environmental and water rights in the
The theory of good governance

Constitution of the Republic of South Africa\textsuperscript{159}. The democratic government carried out a comprehensive review of water law, focused on issues of equity (Kidd, 2008). The resultant National Water Act\textsuperscript{160} contains a comprehensive agenda on water resource management. It is anchored on the concept of integrated management, directed at achieving sustainability, equity, efficiency and effectiveness, in which there is decentralization and participatory process (Republic of South Africa, 1998). The National Water Resources Strategy (2004) is provided for in the National Water Act (1998)\textsuperscript{161}. A notable aspect of the document is its provision for the concept of IWRM. This promotes coordinated development and management of water, land and related resources. It is intended to maximize economic and social welfare in an equitable manner, without compromising vital ecosystems sustainability (DWAF, 2004a).

4.20 CHAPTER SUMMARY

The chapter examined the international recognition of good governance theory. It examined the potentials and constraints militating against the practice, discussed the dimensions of good water governance and focused on the good governance theory characterised by (TAP). They were contextualised, while the implications and constraints of good governance in water supply were identified. The dimensions of good water governance institutionalised in the four pillars of social, economic, environment and politics were examined, to identify their import in the potable water sector. The significance of the concept of participation as the epicentre of the research was examined, while its applicability within Nigeria legal framework was contextually identified and criticised. The chapter examined the nexus of participation with Human Rights, while stakeholders’ role in actualising Human Rights to water was critically examined. The

\textsuperscript{159} 1996
\textsuperscript{160} 1998
\textsuperscript{161} Section 5
chapter discussed the PWG and its positive impacts in the exercise of power. Participatory process was exemplified in some PWG models and some African countries.
CHAPTER 5: CONCEPTUAL FRAMEWORK DEVELOPMENT FOR PARTICIPATORY WATER GOVERNANCE IN NIGERIA

5.0 INTRODUCTION

The fourth objective is to develop a conceptual framework of participatory water governance. The development is based on emergent principles from the literature review, while the constraints in development are examined. The nexus between the theory of collaboration and stakeholders’ participation in the potable water sector is established. This is exemplified in the context of donors who may be corporate organisations and NGOs. The chapter presents the contextual framework as a graphic and narrative form of main issues for inquiry, such as the key factors and presumed relationships among them (Miles and Huberman, 1994). The PWG process is first generalized and later localized by justification for rural community involvement. The conceptual framework process is identified in phases of planning and enunciated in compartments of inter-relationships, from the federal and state machinery under the guidance of laws, authorized by the constitution and fusing with rural machinery for governance. The Rural Advisory Board (RAB) addresses the rural management with clearly defined mechanisms for accountability and governance techniques. The RAB adopts the community norms and values, in which traditional sanction methods are explored for enforcement and compliance, while the CTFs are vested with responsibilities that may achieve the RAB objectives. The chapter discusses the relevance of laws, policies and TAP principles in the scheme of the governance framework, the planning and implementation of PWG.
5.1 CONTEXTUALIZING PARTICIPATORY WATER GOVERNANCE FRAMEWORK FOR NIGERIA

Laws and regulations are enacted by National and State Assemblies, based on the authority of the Constitution of the Federal Republic of Nigeria 1999\textsuperscript{162}. The water laws and regulations are adopted by the federal and state government agencies for implementation while enacted laws should follow the broad directives of constitutional requirements, which express the needs of the people, their culture and normative dispensations.

**Federal and State Agencies**- The institutions managing water resources in Nigeria have already been discussed (Chapter 2.4). The agencies, guided by enacted laws, plan, formulate and implement policies. The institutions manage the sources and state of potable water resources to ensure sufficiency of water supply in terms of quality and quantity. They articulate the social, economic, political and environmental dimensions of good water governance in their policy documents (Chapter 4.4). TAP as the elements of good water governance is identified in the policies (Chapter 4.5). The government’s obligations for ‘respecting’, ‘fulfilling’ and ‘protecting’ the users of potable water, should also be clearly stated in the institutions’ policy documents (Chapter 4.12.1).

**Stakeholders**- These are the state and non-state actors, involved in the supply and consumption of potable water. The terminology may also refer to any other persons connected to potable water supply, such as the corporate organisations and NGOs. The state actors, who are government representatives, are a part of the decision-making process, while the non-state actors receive the end-product of potable water.

\textsuperscript{162} Part 11 (Amended in 7 March, 2011), Section 4 (2)
Participatory water governance - This is the transformation of potable water management from government top-down system to top-down/bottom-up governance structure. The governance system is an inclusion of state and non-state actors, jointly making decisions for potable water supply, ensuring an effective and efficient management.

The Court of Laws - The Court of Laws remains the bastion for justice and community members may have recourse to it for enforcement, interpretation or decisions of litigations arising from water related issues.

5.2 GENERAL CONSTRAINTS IN DEVELOPING PARTICIPATORY WATER GOVERNANCE FRAMEWORK IN NIGERIA

Adoption of participation theory as the epicenter in solving potable water management problems, may not be free of likely constraints, against the practicality of PWG. Some of the challenges are identified in the following:

5.2.1 Designing the Participatory Water Governance Framework and Transferability

Designing the PWG framework is crucial to the reform. However, this aspect remains generally under-illuminated in existing literature. This stems from writers’ focus on only particularized non-transferable fields, resulting in knowledge limitation. Participants’ interest may be weak due to this constraint (Michener, 1998). However, adopting a deductive approach, in which the framework is diagrammatically presented, while participants are invited to express their perceptions during empirical inquiry, is a likely solution.
5.2.2 Funding Challenges

The inclusion of participatory process in potable water framework may not be well received by stakeholders, due to varying mis-conceptions and under-estimation of the potential impacts. For example, some researchers have argued, that the PWG framework may be a time consuming venture requiring enormous financial obligations, with regard to personnel and infrastructure (Karl, 2000). Arguably, apprehension exercised by community members on project funding may constitute a major constraint, likely to stultify a proposal. However, the initiators may provide the initial answer to funding, provision of infrastructure or technical knowledge. Furthermore, an effectively executed organisational structure is expected to mitigate this hardship, if remitted water tariff can be judiciously utilized and not diverted for spurious purposes.

Potable water may be expensive to achieve (Okorodudu-Fubara, 1994). Therefore, feasibility of supplying such water to every community may be a point of argument. However, since everybody has a right to potable water, a way out of the problem is to channel supply through a major water system already existing in huge capacity and centrally located. The argument for this is reflected on the supply of petroleum products in Nigeria by the Warri refinery to the Kaduna plant, regardless of the long distance (Igbinovia, 2014).

5.2.3 Lack of Technical Knowledge

The study is focused on the rural communities, where existing technical knowledge may be inadequate to address unforeseen technicalities, in the utilization of the infrastructure. For example, the community may experience breakdown in the water system, requiring experts’ attention. A needed foreseeability should necessitate the training of some local persons in addressing uncomplicated technical issues, while major challenges may be addressed by the state.
5.2.4 Inequitable Provision of Rules for Payment of Water Rates

The ICWE (1992) suggests that water should be regarded as an economic good. However, there cannot be sustainability in water development initiatives, without considering issues of equity and poverty (Rahaman and Varis, 2005). The provision of the Dublin Conference was consolidated into the Agenda 21 in Rio de Janeiro and has been domesticated in Nigeria (Nigeria Country Profile, 1997).

Nigeria is generally, beleaguered with challenges arising from non-payment for goods and services such as light and water. The omission is based on the argument that corporate social responsibility (CSR) ought to be exercised by corporate organisations that have availed themselves of ecosystem benefits (Nigerian Conservation Foundation, 2015).

Some rural communities’ opinion-makers may be reluctant to pay for water usage. Their demand for exemption may impliedly frustrate transformative efforts. Furthermore, some community members’ vulnerability status (either as a result of advanced chronological age, ill health or physical disadvantage), may also require exemption from payment. The CESCR (2003) provision earlier cited however, provides for this category of persons.

5.2.5 Inadequate Information

Affordability is a key word associated with payment of water rates, yet lack of adequate information in this regard, may complicate reforms (United States Environmental Protection Agency, 1998). Therefore, dissemination of information, sensitizing community members

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163 Principle 4
164 Chapter 18
165 General Comment No. 15
through workshops, seminars and jingles, is key to success. This may be achieved by educating rural community members on minimal payment for water supply and in accepting potable water supply as a better option to polluted water.

5.2.6 Politicization of Potable Water Supply

Politics has undermined the essence of potable water supply as a key issue in the translation of environmental benefits, to the populace in Nigeria (Steven et al., 2015). Aspiring political office holders request for votes, premised on the supply of potable water. However, communities may be presented with unsustainable infrastructure. Oftentimes, the promises are never executed (Wild et al., 2012). Although water supply is inexorably tied to politics, the nexus should be channeled into democratization of decision-making. While appointments should be by selection or election for governance positions, credibility of candidature is relevant in matters of representation. Thus, votes should be cast, counted and cumulate in validly declared results.

5.2.7 Competing Forces

Inefficient utilization of resources may occur in the exploration of the PWG. This may result when a community group arrives at decisions already identified by a single agency administration (Irvin and Stansbury, 2004). This study recognizes that the emergence of competing forces cannot be ruled out in a reformative project. However, it is trite to say that human beings are more co-operative and altruistic, when directly involved in projects considered beneficial to the general public (Irvin and Stansbury, 2004).

An argument may ensue that, implementation of water sector reforms may encounter resistance, arising from non-actors’ preference for the status quo (Sehring, 2009b). This results from intentions to protect business and personal interests (Pierson, 2000).
5.2.8 Modelling Issues

Non-state actors may prefer adapting to their past and present experiences, than the importation of models (Cleaver and Franks, 2005). However, the proposed PWG is a model based on traditional consensual day to day co-existence, which does not represent any foreign model, separated from the people’s culture (Kienzle et al., 1997) and inimical to their traditional experiences. Evidential information on reforms also indicate that, non-actors may find it difficult to adapt to change or innovations (Cleaver and Franks, 2005), because of unfamiliarity with a particular framework or model.

5.2.9 Constraint by Time Factor

The enjoyment and appreciation of reformative ideas may be constrained by time factor, seen by stakeholders as signifying failure. However, where it is due to project gestation, project sustainability stands a better chance of success. A typical example is the replacement of Nigeria Telecommunications Ltd. (NITEL) with the Global Mobile Services (GSM) in the 1990s (NITEL Company Profile, 2013). This is considered as a remarkable transformation of information network, resulting in positive socio-economic empowerment.

In spite of prevalent challenges in developing a PWG framework, the advantages out-weigh the problems (Chapters 4.2 and 4.17). Bearing these challenges in mind, the study takes cognizance of traditional norms and values (Rogers and Hall, 2003), which may be referenced for the people of Nigeria. Lessons emerging from this study could, therefore, be better utilized for anticipated opportunities and challenges. In adapting policies and strategies of PWG at the rural community level, the members may benefit from the positive impacts.
In developing the conceptual framework, the study is undertaken with a predetermination that PWG is not self-coordinated. The emergence is based on collective planning, organisation and implementation, since various stakeholders’ interests are involved. Thus, collaboration is strategic for planning and implementation, while good governance requires that the institutional management of potable water should have funds, infrastructure, human resources and equipment (Louka, 2008). These elements may be used to deal with challenges and constraints, likely to emerge in a PWG. The collaboration of stakeholders may, therefore, be relevant in assuaging majority of the challenges.

5.3 THEORY OF COLLABORATION

Within the twenty-first century, collaboration has assumed a rising profile, resulting from society’s awareness of the relevance of thinking and working together on critical issues (Austin, 2000). Collaboration is generally, acknowledged when collaborators expect beneficial outcomes or benefits, from combined efforts (Austin, 2000). Thus, more notable causal outcomes elicit higher participation and collaborative commitment (Welch, 1998). This may imply a synergic relationship, which is mutually advantageous for compatible business participants (Merriam-Webster, 2013).

Collaboration has no consensus definition, due to limitations in understanding what it portrays (Elliot, 2001). However, it may be regarded as a combined action in operation (Merriam-Webster, 2013). Collaboration may be explored in the fields of economics, ethnography, sociology, demography, biology (Murray and Loe, 2012), including environmental law. Relevant stakeholders may thus, collaborate for commonalty of potable water supply (Jenni and Maurice, 2004), potentially advantageous for a proposed PWG.
5.4 COLLABORATIVE PROCESS IN PARTICIPATORY WATER GOVERNANCE

In this study, the critical issue requiring collaboration is, potable water sustainability. Controversy has, however, trailed the collaborative process for several years, arising from compartmentalization problems (Gray, 1989). Thus, in most cases, collaboration may not be recognized as means of achieving management effectiveness (Fung and Wright, 2001), whereas, one of its usefulness is participation of stakeholders, consisting of state and non-state actors. Collaborative process is a governing arrangement, in which one or more public agencies directly engage non-state actors in collective decision-making process (Ansell and Gash, 2001). The process is formally consensus-oriented, deliberative, aims to implement public policy or manage public programs (Ansell and Gash, 2001). From the foregoing, six issues illustrate the relevance of collaboration in PWG, illuminating the process as pertinent to effective governance system (Ansell and Gash, 2001) (Table 5.1).

Table 5.1: Collaborative process in participatory water governance

<table>
<thead>
<tr>
<th>COLLABORATIVE PROCESS IN PARTICIPATORY WATER GOVERNANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>It implies an arrangement, where one or more public agencies directly engage non-state actors in collective decision-making process.</td>
</tr>
<tr>
<td>The participants include non-state actors.</td>
</tr>
<tr>
<td>The participants are not only consulted by public agencies, they are engaged directly in decision-making.</td>
</tr>
<tr>
<td>There is consensus decision.</td>
</tr>
<tr>
<td>Stakeholders meet collectively and formally.</td>
</tr>
<tr>
<td>The forms of collaboration are based on public policy or management.</td>
</tr>
</tbody>
</table>

Source: Adapted from Ansell and Gash (2001) Copyright approval provided (Appendix 14.2)

The general theme running through the above illustrations is ‘governance’, referred to as “regimes of laws, rules, judicial decisions and administrative practices that constrain, prescribe and enable the provision of publicly supported goods and services” (Lynn et al., 2001). The foregoing definition appears too restrictive of inclusion of other forms of governance. Stoker (1998) opined that, governance refers to “the rules and forms that guide collective decision-making”. This definition provides elasticity of inclusionary, established governing structures and
Conceptual framework development for participatory water governance in Nigeria

emerging forms of public and private decision-making bodies. Thus, governance focuses on decision-making and not on individuals involved in decision-making. It is about groups of persons, organisations or systems of organisations making the decisions (Ansell and Gash, 2001).

In the argument over the interpretation of ‘collaborative governance,’ arising from Ansell and Gash’s (2001) definition, some researchers posit that, the initiators are typically and generally government agencies (Ansell and Gash, 2001). Some others use the term to signify a different type of relationship, between public agencies and non-state actors (Smith, 1998). Connick and Innes (2003) have argued that, collaborative governance involves representatives, who are key interest groups, while governance includes representatives of all relevant interests. Reilly (1998) proposed that, collaborative effort is a type of problem-solving, involving the shared goals of government agencies and concerned citizens. These arguments illuminate this study’s location of collaborative governance as consensus decision-making by stakeholders, who are state and non-state actors of potable water, participating in decision-making. Thus, collaborative governance may present the opportunity for stakeholders to discuss and influence one another on relevant issues affecting the management of potable water.

5.4.1 Advantages of collaboration in participatory water governance

A major implication of collaboration is that, the onus of responsibility for policy outcomes rests on stakeholders collaborating in the PWG (Fung and Wright, 2001). Based on this, researchers have called for a more general theoretical account of collaborative governance (Gray, 1989). This may enable policy re-orientation. Thus, while institutions may be reformed, education and awareness may be optimized. Stakeholders’ participation may also be encouraged, to enrich output in decision-taking. Collaboration may encourage the linking of policies to research
development, while, governance techniques may ensure robust and efficient potable water governance (Fung and Wright, 2001). Collaborative governance should, however, be flexible to accommodate changes, focusing on effectiveness. In reaction to the foregoing discussion, the following paragraphs establish the category of persons referred to in this study as major stakeholders, who may be affected by collaboration and effect it in the PWG (Table 5.2) and (Chapter 5.5).

**Table 5.2: Stakeholders affected by reformatory intervention in potable water supply**

<table>
<thead>
<tr>
<th>STAKEHOLDERS AFFECTED BY REFORMATORY INTERVENTION IN POTABLE WATER SUPPLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Those likely to be affected either positively or negatively by a proposal (Bakker, 2003)</td>
</tr>
<tr>
<td>Persons who might be classed as ‘voiceless’ and for whom special efforts ought to be made (Jacobson and Wilde, 2013)</td>
</tr>
<tr>
<td>Those representing people likely to be affected by interventionist projects (UN Water Virtual Learning Centre, 2011)</td>
</tr>
<tr>
<td>Those likely to mobilize for or against a developmental proposal (Louka, 2008)</td>
</tr>
<tr>
<td>Persons having capacity to make what is intended more effective, through their participation or less effective by their non-participation or direct opposition (Bakker, 2003)</td>
</tr>
<tr>
<td>Those who can contribute to knowledge by their technical know-how or can provide financial resources (Louka, 2008)</td>
</tr>
<tr>
<td>Those responsible for what is proposed (Hickey and Mohan, 2004)</td>
</tr>
</tbody>
</table>

### 5.5 STAKEHOLDERS COLLABORATING FOR PARTICIPATORY WATER GOVERNANCE

Stakeholders are persons having a stake in an enterprise or are involved in or affected by a course of action (Merriam-Webster Dictionary, 2013). They are also regarded as those likely to be affected by the outcome of an interventionist proposal. They may be identified by the foregoing characteristics (Table 5.2) (UN Water Virtual Learning Centre, 2011), while issues raised in the following paragraphs elaborate further.

In this study, stakeholders consist of non-state actors, who are the consumers of potable water or those persons, who may collaborate to effect the PWG in rural communities. Another group of stakeholders are the state actors. As decision-makers in government, they are civil servants in various agencies for potable water management. The PWG is built around the collaboration
of these two groups who, in the process fuse together in action for the successful execution of the PWG proposed in the study (Figure 5.1). The study also discusses the relationships/capacity of stakeholders (Table 5.3).

![Image](image177x558to445x685)

**Figure 5.1: Fusion of state and non-state actors for participatory water governance**

<table>
<thead>
<tr>
<th>STAKEHOLDERS</th>
<th>RELATIONSHIPS/CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministries of Health, Environment and Water Resources; Local Government Council; Rural Water Board; Community leadership.</td>
<td>Persons who have capacity to make what is intended more effective through their participation or less effective by their non-participation or direct opposition.</td>
</tr>
<tr>
<td>Experts, private financiers, Donors, members of the academic institution.</td>
<td>Persons who may contribute to knowledge by their technical knowledge or provide financial resources.</td>
</tr>
<tr>
<td>NGOs, community social organisations.</td>
<td>Those representing the people likely to be affected by the PWG process as an interventionist project.</td>
</tr>
<tr>
<td>Community leadership- head of community, elected and appointed members, women and youth leaders.</td>
<td>Those likely to mobilize for or against developmental proposal for PWG.</td>
</tr>
<tr>
<td>Experts, private financier, Donors such as corporate organisations and NGOs.</td>
<td>Those responsible for what is proposed.</td>
</tr>
<tr>
<td>Corporate organisations; academic members; community social organisations; businessmen; individual community members having an interest, such as: land-owners representing themselves, community private financiers; elected and appointed members; farmers, artisans and others engaged in skilled work.</td>
<td>Those likely to be affected either positively or negatively by a proposal.</td>
</tr>
<tr>
<td>Rural community non-state actors (Grassroots members).</td>
<td>Persons who might be classed as ‘voiceless’ and for whom special efforts ought to be made.</td>
</tr>
</tbody>
</table>

The following sections contain discussions of the role of Donors who are corporate organisations and NGOs, in their capacity as major stakeholders collaborating with state and non-state actors for PWG.
5.5.1 Donors Collaborating for Participatory Water Governance

Donor aid for potable water supply has increasingly become the focus of international attention since 2001. Notable impact on global water and sanitation by external donors emerged from the first international drinking water supply and sanitation decade 1981-1990 (Gangarosa, 2009). Donors, who may also be the initiators of participatory water projects have thus, established important influence on water supply, reflecting in water projects successfully implemented (World Water Council, 2010).

Collaborating donors may be corporate organisations, such as those involved in oil explorations, financial banks, manufacturing companies, telecommunication service providers and several others. Their major goal is to enhance positive impacts on innovation of new products and services beneficial to society and enterprises, while minimising and preventing negative impacts (Murray and Dainty, 2009). Donors achieve these by building on self-regulating mechanisms, where a business monitors and ensures active compliance with the law, ethical standards and international norms (Commission of the European Communities, 2002). Contemporarily, corporate organisations are held responsible for environmental impacts within their immediate area of operation (Hartman et al., 2007). For example, there is the requirement that countries should prevent third parties like the corporate organisations, from interfering in any way with the enjoyment of the right to water supply (CESCR, 2003). This is to prevent private sector over-pricing of potable water supply and thus, avoid orchestrated monopoly and un-availability (Hartman et al., 2007). However, while constraint is imposed on them, their positive impacts are globally recognised (Mullerat, 2011). Thus, one of the major options that Nigeria may explore to improve potable water management, while closing the gaps created by challenges in the sector, is through the collaborative activities of corporate organisations. This may not be considered as interference.
Corporate organisations in collaboration for PWG: Corporate organisations’ beneficiary status in their immediate environment requires reciprocal contribution to host rural community members’ well-being. This is referred to as CSR. It is the continuing commitment by businesses, to contribute to economic development, while improving the quality of life of the work-place, the families, the community and society at large (WBCSD, 1999). CSR is the reciprocal acts of corporate organisations, arising from their impacts on society (The Commission of the European Communities, 2002). Other international institutions, such as the Organisation for Economic Co-operation and Development (OECD) and the Global Sullivan Principles (1999) are also in support of CSR (Zerk, 2012). Thus, CSR is one of the major global environmental protection issues and development strategies by corporate organisations, for addressing crucial community problems, in which they may provide reasonable answers (Horrigan, 2010).

Literature on the Global Sullivan Principles, depict it as responsible for expanding the corporate code of conduct, which won acceptability in 1977 and 1999. The principles require multinational companies’ full participation in advancing Human Rights and social justice. Sullivan (1999) declared that, the principles’ major objective is to support socio-economic and political justice by companies, where they do business, including respect for Human Rights and equal work opportunities. Corporate organisations should impact on communities (Murray and Dainty, 2009), by having in place, a process of integrating social, environmental, ethical Human Rights and consumer concerns into their business operations and core strategy, in close collaboration with stakeholders (European Commission, 2011). Thus, they may be acting for the social engineering of societal progress, in a fast changing global environment. Typical examples may be cited from Morocco, where Office Natnale de l’Eau Potable (ONEP) is faced with the challenges of increasing potable water supply and the sustainability of such efforts (Brikke, 2004) and in Nigeria, where the Airtel GSM provided borehole for potable water supply to a
school in Ediba in fulfilment of CSR (Ofulue, 2014). Corporate organisations’ role in PWG may therefore, translate into planning, implementation and maintenance for an effective water supply.

**Theoretic constraints of corporate organisations:** Collaborative efforts by donors have proven advantages (Chapter 5.4.1), but, they may be theoretically, constrained by the questions on their motivation for social benefits provision (McWilliams et al., 2005). Thus, a motivation may be identified as socially responsible, if it is specifically, for the purpose of serving the society, regardless of profit. However, if the converse is the case, it is a privately responsible act, which may indicate that, the social benefits exceed the cost of action. The challenge is further compounded by lack of specific definition for CSR as a term. This has created problems in empirical measurement, in which results cannot be compared (McWilliams et al., 2005).

**Legal constraints of corporate organisations:** Legal hurdles initiated by legislations or the Court of Laws, may impede CSR (Omotola, 1990). Thus, questions may arise on the legality of charitable expenditure in a non-charitable company. This may be premised on inability to reconcile a corporate organisation’s promotion of a cause it believes in through CSR, rather than its acting on behalf of the owners, who are the shareholders. Such an act may be regarded by shareholders as irresponsibility (McWilliams et al., 2005). Thus, in the Nigeria Company Law, companies may only apply funds for authorized businesses, expressly stated in the Objects Clause of the Memorandum of Association (Companies and Allied Matters Act)\(^{166}\). A breach of this requirement may render an act, *ultra-vires*, when companies employ their funds for social,

\(^{166}\) 2004 (Cap C20 LFN), Section 39 (1)
political or charitable purposes. This provision of the enactment has precedence in Ashbury Railway Carriage and Iron Co. Ltd v Richie\textsuperscript{167}. Justification may however, be pleaded. Thus, it was held in Hutton v West Cork Railway Co.\textsuperscript{168} that, justification may be pleaded if the act is done in the company’s interest for the promotion of its prosperity. However, the Court noted an exception when the company’s Objects Clause expressly, permit the use of company’s money on specified purposes, in the case of Intraco Ltd v Multi-Pak Singapore Pte Ltd\textsuperscript{169}. In the case of Charterbridge Corporation Ltd. v Lloyds Bank Ltd\textsuperscript{170}, the Court held that, the exception may be without reference to the relevance or utility of the expenditure to the company’s prosperity or, where the company- if it is a charitable organisation, expends its funds for charitable purposes. The same judgment was held in the case of Re-Horsley v Weight\textsuperscript{171}. The legal hurdle has been orchestrated by legislation, since CSR is a non-justiciable and un-enforceable act, in which generally, laws hardly expressly require it of corporate organisations. However, exercising CSR as a voluntary act, may be a reflection of contemporaneous trend, in which there is wide applicability in Objects Clause, permitting directors to execute activities, likely to promote company’s interest (Omotola, 1990).

The term ‘donor’ may also refer to NGOs, additionally called ‘civil society organisations’ (Willetts, 2006). NGOs are referred to as ‘implementers, catalysts and partners’ (Lewis 2007), because of their task orientation (Sachchidananda, 1999; Lewis and Kainji, 2009). They are made up of persons with common interest, performing in diverse ways of services and humanitarian assignments, in bringing public concern to government’s attention (Martens, 2002). NGOs may

\textsuperscript{167} [1875] LR 7 H. L. 653
\textsuperscript{168} [1883] 23 Ch D 654
\textsuperscript{169} [1995] 1 SLR 313 (SGCA); Ho Kang Peng v Scintronix Corp. Ltd. (2014) 3 SLR 329
\textsuperscript{170} [1970] Ch 62 at 74
\textsuperscript{171} (1982) 3 All ER 1045
monitor policies, implementation of programs and encouragement of community participation
of programs and projects (Gotz, 2008), such as the effective supply of potable water and they
may play major roles in participatory governance.

NGOs as donors, may be networks and partnerships. For example, the Global Water Initiative is
a coalition of international organisations, working on the promotion of water supply, sanitation
and hygiene services. It is in thirteen countries in Central America, West Africa and East Africa.
As an action network, it is open to organisations involved in developing water resource
management in developed and developing nations. This includes government institutions and
agencies of the UN. It carries out bilateral and multi-lateral developments through banks,
professional associations, research institutions, NGOs, and private sectors with interest in the
IWRM (Global Water Initiative in West Africa, 2012).

Researching institutions may collaborate for potable water as donors. For example, the UNESCO
Center for Water Law, Policy and Science. It encourages the building of local capacity for water
leadership, globally and provides critical researches to decision-makers (UNESCO, 2014).

Government/multi-lateral institutions may also collaborate as donors for potable water supply.
Examples include UNICEF, whose operationalization is in more than ninety countries. It
improves water supply and sanitation facilities (UNICEF, 1989). WHO/UNICEF Joint Monitoring
Program (JMP) for Water Supply and Sanitation creates resource for decision-makers,
researchers and civil society to be educated about JMP activities on the state of potable water
supply and sanitation. It includes the importance of good health, statistics on the use of water
and sanitation facilities at international, regional and national levels (WHO/UNICEF JMP, 2012).
The DFID is the Department for international development in water and sanitation, in the United
Kingdom. It has an operational plan released in 2012\(^{172}\), in which it will assist Nigeria in combating socio-economic issues, which are debilitating for Nigerians including water supply (DFID, 2011).

For purposes of clarity, these identified institutions may feature as donors within an interwoven capacity. Thus, it might be relevant for beneficiaries of donor agencies to establish donor capacity, to avoid mistaken identity and ensuing conflicts.

**NGOs collaborating for PWG:** NGOs are recognized for hybrid existence, in which they may focus on change and maintenance of current socio-political systems (Morris-Suzuki, 2000). They are mainly identified for advocacy on development and may be active in undertaking activities on basic service delivery to dis-advantaged persons and advocating for needed policy change (Lewis and Kanji, 2005). In executing these, they may be visible in relevant fields of conflict resolution, preservation of cultural ethos, policy analysis, democratic re-orientation, information dis-emination and researching (Smout, 1996). Bebbington et al. (2008), in contributing to the discourse, argued for the relevance of NGOs’ activity in processes and structures of systemic change, apart from the current forms of development. On the other hand, Lewis and Kanji (2005) expressed the view that, NGOs may likely focus more on charitable forms reflecting humanitarianism or pro-welfare activities, rather than advocacy for empowerment, participation and sustainability, which had previously been the focus of some NGOs. It may be argued that, the latter argument indicates an inter-woven focus, rather than a dis-connection, which the writers point at. The various arguments on NGOs’ capacity may thus, be regarded as direct indications of multi-dimensional perceptions of what the NGOs portend for society’s

\(^{172}\) Operational Plan 2011-2015
development. This may be regarded as the direct implication of the inability to proffer a singularly acceptable definition of NGOs, which may only be defined connotatively and in different circumstances (Willets, 2006).

There is however, copious literature, in which writers seek to define the term within a narrow or wider sense. From a legal point, the United Kingdom Public Law Project identifies NGOs as privately constituted organisations. They may be companies, professionals, trade, voluntary organisations or charities, which may or may not make profit (Sunkin et al., 1993). The definition implies that, every non-state organisation may be regarded as forms of NGOs. This may have further exacerbated the problem of identity. NGOs may also be viewed as groups of individuals, organized for the myriad of reasons that engage human imagination and aspirations (Charnovitz, 1997). However, this definition may be criticized as too broad to be suitable for empirical analysis. Lewis and Kanji (2005) are of the opinion that NGOs are mainly concerned with promoting social, political or economic changes- an agenda usually associated with ‘development’ concept. This definition emphasizes NGOs as agencies primarily, engaged in work relating to areas of development or humanitarianism at the local, national or international levels. Vakil (1997) also opined that, NGOs are self-governing, private, not-for-profit organisations and focused on improving the quality of life for dis-advantaged people. In furthering the different perceptions on NGOs’ identity, Willets (2006) views them as voluntarily associated persons, acting and working continually together for a recognized purpose, either at the international, national, state or community levels, apart from governmental office, making of money or involvement in illegal activities. Based on the various definitions, it may be surmised that, while it is difficult to pinpoint a particular definition as serving the research purpose in totality, it is however relevant that NGOs may be regarded as connoting voluntarism,
Conceptual framework development for participatory water governance in Nigeria

interventionism and development at international, national and local levels. Within this research however, the term may be examined from its nexus with local communities.

Willetts (2006) has argued that fundamentally, NGOs may be characterized by independence of direct governmental control. Thus, they should not be constituted as political parties, profit oriented, criminally inclined nor engaged in violent activities (Lewis and Kainji, 2009). These conditions are relevant for an NGO’s recognition by the UN (Willetts, 2006). Some NGOs may however, be associated with political parties and generation of income from commercial activities with particular regard to consultancy contracts or sale of publications (Willetts, 2006).

A few may also be associated with violent political protests, which in reality may not categorize them as NGOs (International NGO Training and Research Center, 2008).

NGOs are independent of governmental influence, although, the government may influence them indirectly when designed programs give likelihood of government support with grants or contracts. Some NGOs may thus, request for funding for innovative approaches, so that a government may re-assess a particular policy (Morphet, 1996). In supporting the social reformation of a process considered important, NGOs may engage in political action, since politics is seen broadly, as a process, in which people reach collective decisions (Morphet, 1996). This may reflect in the PWG, which has an underlying politics with democratization as the hallmark.

NGOs generally harbour deep suspicion directed at corporate organisations’ implementation of CSR. This had been reiterated by the former Secretary-General of UN, Kofi Annan (1999), who explicitly called on companies to widen their social responsibilities by entering into a global compact with the UN (Aras and Crowther, 2012). Some NGOs have, therefore, engaged their
activities in collaboration, for the purpose of monitoring and formulating business ethics with companies. An example is the WWF (Worldwide Fund for Nature), which formed the Forest Stewardship Council in 1993 and the Marine Stewardship Council in 1996. They were intended to promote sustainable practices by participating companies. Corporate organisations may, thus, be endorsed by NGOs, as being environmentally friendly. Such efforts- exerted for the purpose of investigating the social compliance of corporate organisations, may equally be directed at the issue of potable water supply in rural communities.

NGOs have specifically held different attractions for varied reasons commencing from 1980s. For example, they provide a more flexible funding opportunity with a better chance for localized implementation and grassroots participation (Cernea, 1988). This may be contrasted with the earlier governmental donors, facing bureaucratic challenges from ineffective government projects-based aid (Cernea, 1988). NGOs are reputed to foster local participation and have proximal relationships with marginalized communities. This may be compared to monopoly of decision-making processes by elites and diversion of the bulk of resources intended for public services (UNDP, 1987). Since they are not profit oriented, in exploring voluntary community input, they incur lesser costs in their intervention activities. In this regard, NGOs may usually, prepare agenda for program development, while their innovative capacity for contemporary ideas and approaches, suitable for development are initiated within their area of activities (UNDP, 1987).

NGOs’ profile in PWG in Nigeria remains obscured in spite of globally recognized developmental impacts. This may be attributed principally, to their diverse contextuality. Thus, meaningful generalizations of their role in this regard may be perceived as difficult. Reasons for this may be traced to an under-developed literature research and single case study of specific organisations,
which have rendered generalizations difficult (Lewis, 2005). Further argument is that, PWG has not been popularized sufficiently in Nigeria, due to a system that is top-down in management and over-centralized. This presupposes that efforts in that regard by NGOs may not have been adequately recognized as to disseminate information in literature. Other reasons may be attributed to lack of objectivity by consultants or Donors, who embark on researches on behalf of particular NGOs. NGOs may also have inadvertently caused their own obscurity by their preference for prioritizing their daily work schedule above the provision of access to researchers (Lewis, 2005).

This study has involved the NGOs into the focus of the study for the purpose of channeling their capacity for representing people likely to be affected by interventionist project. A typical example of this may be cited in the Brent Spar Event (1995) in the United Kingdom. The Greenpeace Organisation launched a world-wide protest against the dumping of an obsolete spar into an approved dump site in the West of Scotland. It would otherwise have been consigned to the bottom of the Atlantic Ocean by the Shell Company (Simpson and Fagbohun, 1994).

**Legal constraints of NGOs:** NGOs’ collaboration may be constrained legally, by the doctrine of ‘locus standi’, which may limit their activities or militate against maximum input in the PWG process. ‘Locus standi’ is a right of appearance in a Court of Justice or before a legislative body, in a given question (Blacks, 1990). It may also be regarded as ‘standing to sue’, which was articulated in the case of *Senator Abraham Ade Adesanya v President of the Republic of Nigeria*
& Anor\textsuperscript{173}. It is the capacity of a person to institute legal action in Court of Laws or other competent tribunal (Onyeabor, 2008). The potency of the doctrine was demonstrated in the case of Jimoh Lawani and others v The West African Portland Cement Company Ltd\textsuperscript{174} and expressly provided for in the 1999 Constitution of the Federal Republic of Nigeria\textsuperscript{175}. Thus, a Plaintiff in an action for public nuisance under the Common Law, must prove that some special damage different from that suffered by the general public has been suffered by him or her. In Jimoh Lawani’s case, the Plaintiff prayed the court to grant damages against the Defendant for discharge of fumes, dust, sewage and slurry, which caused flooding and pollution in the said land. The Plaintiff also asked for an injunction to restrain Defendants from further polluting acts. In an interlocutory objection, Defendants maintained that Plaintiff lacked ‘locus standi’ since the action was based on public nuisance and ought to be instituted by the Attorney-General. The objection was sustained by the Court. The same decision was reached in Amos & Ords. v Shell BP Petroleum Development Company of Nigeria Ltd\textsuperscript{176}. In tandem with this, the statement credited to Lord Denning in R v Paddington Valuation Officer Ex parte Peachy Property Corporation Ltd.\textsuperscript{177} is instructive on the doctrine of ‘locus standi’ and calls for reflective reaction. The Learned Judge held that, the Court would not listen to a mere busy-body, who was interfering in things, which did not concern him, but it will listen to any one, whose interests are affected by what has been done.

Since the doctrine of locus standi goes to the bedrock of any cause of action, it is, therefore, necessary that NGOs seeking to support an intervention project should exercise restraint in actions explored. Lobbies for government support for projects (International NGO Training and

\textsuperscript{173} [1981] LPELR-SC.1/1981
\textsuperscript{174} [1971] Abeokuta High Court Suit No. AB/82/71
\textsuperscript{175} Section 6 (6) (b) and Section 272 (1)
\textsuperscript{176} [1974] 4 ECSLR 436, 35
\textsuperscript{177} [1966] 1 QB 380
Research Center, 2008), such as the supply of potable water, peaceful negotiations in the same regard (Council of Europe, 2015), letter writing campaign (Coulby et al., 2015) and advocacy for conflict resolution as techniques, have better likelihood of success than litigation impeded by legal constraints.

5.6 GENERALIZING THE DEVELOPMENT OF PARTICIPATORY WATER GOVERNANCE FRAMEWORK

The research proceeds by discussing the phases in the development of PWG project, within a generalized broad level in the following:

**Phase 1 (Decision Analysis):** The initiator of the process may be any of the listed decision-makers (Table 5.4). The Initiator first disseminates information on the proposal, to involve other stakeholders. The purpose and the rationale of the proposal is disclosed. Generally, the government alone cannot decide for a potable water project nor can the community alone decide for themselves. There should be a meeting of minds to ensure inclusion of state and non-state actors (UNDP Users’ Guide on Assessing Water Governance, 2013). Major decision-makers are identified to set up a design team. They decide on the other stakeholders to be invited to join the process planning team.

**Table 5.4: Major decision-makers in participatory water governance process**

<table>
<thead>
<tr>
<th>MAJOR DECISION-MAKERS IN PARTICIPATORY WATER GOVERNANCE PROCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Representatives of the State Ministries of Health, Environment and Water Resources</td>
</tr>
<tr>
<td>Representative of Urban Water Board and Rural Water and Sanitation Agency</td>
</tr>
<tr>
<td>Representatives of corporate organisations, business organisations</td>
</tr>
<tr>
<td>Representative of the academic institution in situ</td>
</tr>
<tr>
<td>Representatives of major NGOs and community social organisation</td>
</tr>
<tr>
<td>Elected member</td>
</tr>
<tr>
<td>Head of community</td>
</tr>
<tr>
<td>The community youth and women leaders</td>
</tr>
<tr>
<td>Experts</td>
</tr>
<tr>
<td>External or internal Donors</td>
</tr>
</tbody>
</table>
Phase 2 (Stakeholder Analysis): Decision-makers are persons who take decisions on the effective supply and governance of potable water. This definition is not at variance from that in which they are regarded as persons, who decide things especially at a high level in an organisation (Cambridge Dictionary, 2016). In this phase, decision-makers decide- who are the stakeholders? What will be their likely interests? At what stage will they be involved in the design? These questions are pertinent and answers are provided in the typology of possible stakeholders (Table 5.5).

Table 5.5: Typology of stakeholders’ interest and stage of involvement in participatory water governance framework

<table>
<thead>
<tr>
<th>STAKEHOLDERS</th>
<th>INTEREST IN REFORM</th>
<th>STAGE OF INVOLVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGO members</td>
<td>High interest</td>
<td>From decision-making stage</td>
</tr>
<tr>
<td>Business organisation</td>
<td>High interest</td>
<td>At contractual agreement.</td>
</tr>
<tr>
<td>Experts</td>
<td>High interest</td>
<td>From decision making stage</td>
</tr>
<tr>
<td>Corporate organisations</td>
<td>High interest</td>
<td>From decision making stage</td>
</tr>
<tr>
<td>Members of the academic institution</td>
<td>High interest</td>
<td>From decision-making stage</td>
</tr>
<tr>
<td>Elected and appointed members</td>
<td>Head of community</td>
<td>High interest</td>
</tr>
<tr>
<td>Statutory agencies representatives such as Ministries of Health, Environment and Water Resources</td>
<td>Low interest</td>
<td>From decision-making stage</td>
</tr>
<tr>
<td>Urban Water Board, Rural Water and Sanitation Agency.</td>
<td>Low</td>
<td>From decision-making stage</td>
</tr>
<tr>
<td>Local government council representative.</td>
<td>High interest</td>
<td>From decision-making stage</td>
</tr>
<tr>
<td>Farmers representative</td>
<td>High interest</td>
<td>From decision-making stage</td>
</tr>
<tr>
<td>Artisans’ representative</td>
<td>High interest</td>
<td>From decision-making stage</td>
</tr>
<tr>
<td>Fishermen representative</td>
<td>High interest</td>
<td>From decision-making stage</td>
</tr>
<tr>
<td>Residents association representative</td>
<td>High interest</td>
<td>From decision-making stage</td>
</tr>
<tr>
<td>Land owners’ representative</td>
<td>High interest</td>
<td>From decision-making stage</td>
</tr>
<tr>
<td>Individual community members such as: Those with interests. For example, land-owners representing themselves; Community private financiers.</td>
<td>High interest</td>
<td>From decision-making stage</td>
</tr>
</tbody>
</table>

Phase 3 (Organisational structure): The water infrastructure is owned by the government, corporate organisation, NGOs and users, who may be co-financiers. Those to manage the assets are the state actors (government), corporate organisation and non-state actors. Those expected to play roles in the community, with regard to proper management, such as ensuring enough fuel to power generator, safety, security and maintenance of the infrastructure are specifically
identified rural community members and interested citizens. The organisational structure is collectively arranged by the state and non-actors, corporate organisations and representative of NGOs. To ensure accountability, TAP, government policies, laws and regulations may be explored. There should be checks and balance from the hierarchy and water tariffs may be collected, based on contractual agreement with a private entrepreneur. The primary decision-makers have already been identified (Table 5.4). The purpose for the process has been discussed (Chapter 5.6). The primary goal in decision-making is to ensure fewer risks, meet legal requirements, maximize profits by giving excellent services, which may serve community interest and give effectiveness to potable water management. Incentives for good performance in management should be rewarded by good opinion poll and reportage, during town-hall meetings. Bad managerial performance may be addressed by legal sanctions, litigations, takeover of responsibility by another group, when the subsisting group’s performance is unsatisfactory. Table 5.6 represents the organisational structure.

Table 5.6: Organisational structure for participatory water governance

<table>
<thead>
<tr>
<th>CRITICAL ISSUES</th>
<th>STATE ACTORS</th>
<th>NON-STATE ACTORS</th>
<th>ACTION TAKEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who are the owners of asset?</td>
<td>Government</td>
<td>Corporate organisation, NGOs, individual community financiers</td>
<td>Provision of infrastructure</td>
</tr>
<tr>
<td>Who are the managers of assets?</td>
<td>Government agencies</td>
<td>Corporate organisation, NGOs, community users.</td>
<td>Manageability of assets. Provision of checks and balance.</td>
</tr>
<tr>
<td>What is the role of community?</td>
<td>Interested citizens</td>
<td>Potable water users</td>
<td>Community members ensure supply. Provision of checks and balance.</td>
</tr>
<tr>
<td>Who constitutes the organisational structure?</td>
<td>Government agencies</td>
<td>Corporate organisations, NGOs, community social organisations, experts, potable water users</td>
<td>Action taken is integrated and collaborative</td>
</tr>
<tr>
<td>What is the mechanism for accountability?</td>
<td>Official hierarchy of state actors</td>
<td>Contractual agreement with actors and users.</td>
<td>Laws/regulations, policies and principles such as TAP, task forces.</td>
</tr>
<tr>
<td>Who are the primary decision-makers?</td>
<td>Government agencies representatives</td>
<td>Initiator, community leaders, corporate organisation, NGO leadership, community social organisation, experts, academic member,</td>
<td>They set initial agenda. Provision of public information. They convey objectives and strategy for implementation. They provide consultation.</td>
</tr>
</tbody>
</table>
What are the primary goals of decision-makers?

- To minimize risk. To meet legal and policy requirements.
- To maximize profit. To give efficient performance.
- To serve community interest. To give effective performance.

What are the key incentives for good performance?

- State actors provide feed-back in public policy process.
- Give expert managerial advice
- Provision of price signals; They give customer opinion; Provide voter opinion/Rate-payer opinion. They provide shared goals. They provide community opinion.

What are the key sanctions for failure to provide and maintain services?

- They provide state authority backed by coercion. They may engage in litigations or mediation.
- Declaration of financial loss. Take-over of responsibilities. Institute litigations. Use of political process through the medium of elections.
- Litigations and mediation

<table>
<thead>
<tr>
<th>Participation of actors</th>
<th>Collective, top-down</th>
<th>Individualistic and collective, bottom-up.</th>
<th>Collective- top-down/bottom-up.</th>
</tr>
</thead>
</table>

5.7 LOCALIZING THE PARTICIPATORY WATER GOVERNANCE FRAMEWORK

In an urbanized organizational structure, it may prove difficult relying on community norms and values as tools for compliance and enforcement, unless, it is anchored on management at urbanized units, in which a city may be segmented into quarters. The same challenges may be faced in instituting a RAB (the rural governance system for the management and supply of potable water), which is specifically designed for rural communities in this study. Thus, the foregoing design may be contrasted to the localized governance form.

Localization of amenities has in the past decades become the focal point for pragmatic translation of legal framework provisions, for rural community members’ betterment (Bakker, 2003). Since participation is a process without an end, it should translate beyond theorization, into potable water management at the rural community level. The following sections justify the reasons for rural community members’ involvement in PWG and the constraints.
5.7.1 Justifying Rural Community Capacity and Involvement in Participatory Water Governance

Participation of stakeholders may be regarded as a powerful strategy for effecting transformative development in potable water management (Chambers, 1974; Hickey and Mohan, 2014). Increasingly, therefore, rural communities are becoming the focal point for this (Murray and de Loe, 2012). An emergent cardinal lesson is that, rural community members are more altruistic in matters of public interest, in which they are directly involved. While this serves as impetus for developing a rural community PWG, it is potentially advantageous for extracting community members’ willingness to participate in non-abstract emerging improvements (Bakker, 2003). However, it is subject to conditionality that, the water project has potentials, capable of positively impacting on their daily existence as a transformative development (Hickey and Mohan, 2004). Thus, it must engage their activity, commitment and be capable of providing empowerment. In view of this, recent trend showing progress towards local management of potable water supply schemes, indicate improvement in the quality of rural living and may be regarded as an ‘empowerment’ for members to work together for the common goal of accessing potable water supply (Bakker, 2003).

Improving access to potable water has potentials for eradicating poverty (Bigas, 2012). This was an argument before the court in Mazibuko v City of Johannesburg178. This is fundamental to the success of the project, since it creates ownership feelings. In this regard, community consultation and involvement is critical in the determination of intervention (Environmental Impact Assessment Act, 1992). Involvement is capable of enhancing efficiency, because with community assistance, necessary information, which may otherwise remain obscure, may be

178 [2009] CCT 39/09 ZACC 28
made available, while relevant issues are speedily resolved, due to local knowledge (Rogers and Hall, 2003). This ensures that implementation of local knowledge held by non-state actors enables more effective policies (Fung and Wright, 2001). This is further advanced by the inter-relationships existing among community members. Thus, ideas, information and knowledge are passed from one person to another. Therefore, costly errors and obstructions to effective management of potable water may be avoided. The inter-activity ensures the building of community commitment and development of initiatives, suitable for ethical considerations, in a changing world that demands justice and respect for Human Rights to potable water supply (Declaration of Human Rights on Potable Water, 2010).

Apart from these reasons advanced for inclusion of rural members in the PWG, an important advantage may be the development of effective rulemaking (Louka, 2008). This is capable of facilitating implementation, while reducing the cost of enforcement (Louka, 2008). However, within the real world, beneficial proposals of this nature at the rural community level are bound to experience certain constraints. These will be discussed in the following section.

5.7.2 Constraints in Rural Community Effective Involvement in Participatory Water Governance

Most of the constraints reviewed in the foregoing (Chapter 5.2) may apply in this section. However, three specific issues may become intractable without pragmatic approach. They are discussed in the following:

Conflict of interest: Lack of stakeholders’ cooperation may create difficulties in organizing various stakeholders for PWG. This may result due to conflicting interests borne out of power tussle, suspicion and acrimony, usually traced to demands for unwarranted pecuniary gains. The initiator may, therefore, require maturity, power of persuasion on the over-all effect of the
framework, while transparency should be the center-piece of decision-making process (Hickey and Mohan, 2004).

**Essence of time:** Consultations and discussions, prior to decision making stage may be time consuming and may necessitate patience, astuteness and forbearance on the part of the project initiator (Louka, 2008). Poor rural community members may not be prepared to shelve their daily sustenance activities for participatory process (Gaventa, 2004). The explanation may be ascribed to lack of understanding, borne out of mis-information and suspicion that, the participatory process may portend ‘business as usual’, where elites use the common members of communities for legitimization of projects, which lack enduring empowerment (Haskell, 2001). Thus, the information and understanding of what the process is all about, may require the experts’ repeated explanation, particularly with regard to the technicalities involved (Bakker, 2003).

**Dearth of External support:** A most crucial constraint may emerge with the need for external support from state actors and other persons with special interest (Chambers, 1994). However, there is a presumption that the initiator’s role may prove formidable in this regard due to collaborative discussions at the state institutional level, prior rural community members’ involvement.

### 5.8 PLANNING FOR THE RURAL COMMUNITY PARTICIPATORY WATER GOVERNANCE FRAMEWORK

In consideration of the foregoing envisaged issues arising, this study will plan the framework in stages. The stages will be discussed in the following sections and exemplified diagrammatically (Figure 5.2)
Figure 5.2: Stages of planning for the participatory water governance framework
5.8.1 Clarification of Objective and Decision-Making in Participatory Water Governance Framework

Information of the purpose and rationale for the proposal on potable water management reform, based on PWG is divulged to decision-makers, by the Initiator of the project. This is to set the foundation for involvement. In this study, the purpose is to develop a PWG framework to support potable water supply in Nigeria rural communities. Decision-makers may be identified to set up a design team. The design team maps three stages of stakeholders’ mapping, analysis and engagement strategy. They are discussed in the following paragraphs.

Stakeholders’ Mapping: In this stage, relevant stakeholders are identified by the decision-makers. The mapping indicates who the main state and non-state actors are, while likely Donors are identified also (Table 5.7).

Table 5.7: Stakeholders’ mapping of participatory water governance process

<table>
<thead>
<tr>
<th>PUBLIC SECTOR (ACTORS)</th>
<th>PRIVATE SECTOR (USERS)</th>
<th>CIVIL SOCIETY (NON-STATE ACTORS)</th>
<th>DONORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Agencies:</td>
<td>Corporate organisation (oil, water, and others)</td>
<td>Elected and appointed members, business-men and women, members of the academic institution, community social organisations (e.g. farmers, artisans), Individuals with interests representing themselves as land-owners. NGOs.</td>
<td>Donors- e.g. Banks International donor agencies such as NGOs Private financiers</td>
</tr>
<tr>
<td>Local Agencies:</td>
<td>Experts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Government Council, Rural Water and Sanitation Agency.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Stakeholders’ Analysis: The interests, influence and power of different stakeholders are analyzed in explaining the dynamics at play in the PWG framework. In this stage, focus is on stakeholders’ interest in the potable water supply; The influence that the stakeholders have or are capable of exerting; What the stakeholders’ powers are. The interest, influence and power of stakeholders typified are varied (Table 5.8). The major purpose of this classification is to distinguish the stakeholders, who may facilitate or obstruct the PWG structure being
advocated\textsuperscript{179} (Louka, 2008). In this study, ‘interest’ is intended to be the expressed preferences of the stakeholders. It is also the strategic interest, which stakeholders may possess but, which is covert in them. For instance, stakeholders with ‘low interest’ in reforms are those, who prefer the status quo of potable water management, because of what accrues either in terms of pecuniary benefits or power dynamics, in which power is not shared by inclusion but remains as a top-down structure (Louka, 2008).

The stakeholders with ‘high interest’ are persons, who are optimistic about dividends accruing from potable water supply reforms. This may be traced to the recognized usability in the potable water sector. Some of them in this category may aspire to score a political point with the proposed reform. Stakeholders with ‘high influence’ are those who have capacity to impact positively or negatively on a reform proposal, while persons with ‘low influence’ are those incapable of influencing, due to their socio-economic or political background. Issues on potable water supply are inextricably tied to power dynamics, either from political or socio-economic dimensions (Bohman and Rehg, 1997). Thus, high or low influence may emerge due to these dimensions already stated. Stakeholders with ‘high power’ are well connected politically or by their socio-economic background. They are, therefore, able to influence those who can support reforms, provide financial support or required infrastructural development. Stakeholders with ‘low power’ have none of these attributes. In considering the analysis of stakeholders in the PWG, it is instructive that, although participation enables the unity of people sharing commitments to more equitable and humane forms of socio-political and economic organisation, they may differ greatly on strategy (Bebbington, 2004). Thus, people may differ

on reformative ideas, express scepticism on reformation making a difference, while some may forgive those who seek reform, others may identify Machiavelli inclinations in all they perceive (Bebbington et al., 2008).

Table 5.8: Stakeholders’ analysis of participatory water governance process

<table>
<thead>
<tr>
<th>STAKEHOLDERS (STATE AND NON-STATE)</th>
<th>INTEREST</th>
<th>INFLUENCE</th>
<th>POWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Government Council</td>
<td>High interest. They are committed to reforms.</td>
<td>High influence. They are potential allies of the highly influential State Agencies.</td>
<td>Low power (formal)</td>
</tr>
<tr>
<td>Rural Water and Sanitation Agency</td>
<td>Low interest in reforms. They maintain status quo.</td>
<td>Low influence</td>
<td>Low power (formal)</td>
</tr>
<tr>
<td>Corporate organisations</td>
<td>High interest. Committed to reforms.</td>
<td>High influence Potential champions</td>
<td>High power (informal)</td>
</tr>
<tr>
<td>Community social organisation</td>
<td>High interest. Committed to self-beneficial reforms.</td>
<td>Low influence</td>
<td>Low power (informal)</td>
</tr>
<tr>
<td>NGOs</td>
<td>High interest. Committed to reforms.</td>
<td>Highly influential</td>
<td>High power (informal)</td>
</tr>
<tr>
<td>Elected and appointed member</td>
<td>Low interest in reforms. Maintains status quo.</td>
<td>Highly influential</td>
<td>High power (formal/informal) This depends on office occupied.</td>
</tr>
<tr>
<td>Head of community</td>
<td>High interest in reforms</td>
<td>High/Low influence (It depends on power devolution)</td>
<td>High power - It depends (Informal)</td>
</tr>
<tr>
<td>Academic Member</td>
<td>High interest. Committed to reforms.</td>
<td>Low influence</td>
<td>Low power (informal)</td>
</tr>
<tr>
<td>Business organisation</td>
<td>High interest in reforms</td>
<td>Low influence</td>
<td>Low power (informal)</td>
</tr>
<tr>
<td>Media organisation</td>
<td>High Interest Committed to reforms.</td>
<td>Highly influential</td>
<td>High power (Informal)</td>
</tr>
<tr>
<td>Experts</td>
<td>High interest. Committed to reforms.</td>
<td>Low influence (It depends on the primary designation)</td>
<td>Low power (informal/Formal)</td>
</tr>
<tr>
<td>Individuals with interests representing themselves either as land-owners or as community members such as the youth leader, women leader.</td>
<td>High interest. Committed to reform.</td>
<td>Low influence</td>
<td>Low power (informal)</td>
</tr>
</tbody>
</table>

Stakeholders’ Engagement Strategy: The role each stakeholder plays may depend on the dynamics of interest, influence and power, inherent in them (Bebbington, 2004; Louka, 2008).
The study is cognizant of the varying degrees of stakeholders’ interest, influence and power. Based on the designations, the role of each stakeholder is added value to the dynamics of the PWG. Thus, the initiator of the reform ensures necessary information sharing, monitoring and evaluation; The PWG infrastructure may be owned by the state government alone or collectively; The state institutions train staff, provide collaboration, while state preferences are represented in the RAB; Those to manage the assets are the Local Government Council, RUWASA, specified community users such as representatives of community social organisations, corporate organisation and NGOs; Those to be consulted are the local experts and those who may provide information and create awareness from among the decision-makers; Those expected to play roles in the community with regard to proper management, such as, ensuring that there is enough fuel to power generator, safety and security of the infrastructure, collection of water rates, maintenance and monitoring are the interested rural community members and specifically identified community members; The organizational structure is collectively arranged by the actors from the Local Government Council, RUWASA, private organisations, representatives of NGOs and local experts; To ensure accountability, task forces, customary norms and values, laws, policies and principles of TAP may be explored. TAP enables demonstrable democratic principles, rule of law, information sharing and respect for gender capacity (Louka, 2008). The appointed task forces may ensure effectiveness in enforcement and compliance; The primary goal in decision-making is to institute the RAB by a democratic process, ensure less risks, meet legal requirements, maximize profits by giving excellent services, to serve community interest and give effectiveness to potable water management; Incentives for good performance in management, may be rewarded by good opinion poll and reportage during town-hall meetings. Bad managerial performance may be addressed by legal sanctions, litigations and rural community sanction methods, such as trade and voice ostracism (Elias, 1956), fines or takeover of responsibility by another group, when the
subsisting group is declared unsatisfactory in performance. Table 5.9 represents the engagement of stakeholders. The degree of stakeholders’ involvement, in PWG is identified (Table 5.10), while the role of the stakeholders varies (Table 5.11).

Table 5.9: Stakeholders’ engagement strategy for participatory water governance

<table>
<thead>
<tr>
<th>CRITICAL ISSUES</th>
<th>STAKEHOLDERS (STATE ACTORS)</th>
<th>STAKEHOLDERS (PARTNERS/USERS)</th>
<th>ENGAGEMENT STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major initiative</td>
<td>Initiator, Donor</td>
<td>Private financier</td>
<td>-Initiate reform</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expert</td>
<td>-Information sharing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Corporate organisation</td>
<td>-Public awareness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Implementation of reform</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private financier</td>
<td>-Initiate campaigns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NGO</td>
<td>-Ensure monitoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community users</td>
<td>-Encourage evaluation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community social organisation</td>
<td>Provision of infrastructure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>representatives</td>
<td>-Provision of partnership</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Take initiatives in policy development</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Training of staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Provide informational initiatives.</td>
</tr>
<tr>
<td>Role of community</td>
<td>Potable water users (such as NGOs)</td>
<td>Community members-</td>
<td>Community members-</td>
</tr>
<tr>
<td></td>
<td>Identified community members</td>
<td>-Ensure supply of potable water</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interested community members</td>
<td>-Provide security</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Ensure payment of tariff</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Monitoring</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Maintenance</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Fuel and water usage and availability</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Provide evaluative information.</td>
<td></td>
</tr>
<tr>
<td>Organisational structures</td>
<td>Local Government Council, RUWASA.</td>
<td>Corporate organisations</td>
<td>Integrated and collaborative</td>
</tr>
<tr>
<td></td>
<td>NGOs/community social organisations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experts, media</td>
<td>-Consultations</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Dialogues with community members</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Networking.</td>
<td></td>
</tr>
<tr>
<td>Mechanism for accountability</td>
<td>Hierarchy of state actors (e.g. Accountants)</td>
<td>Non-state actors</td>
<td>Customary norms and values, Laws and Policies, TAP (signifying respect for rule of law, democratic principles, gender equality, equitability), task force empowerment.</td>
</tr>
<tr>
<td>Primary decision-makers</td>
<td>Representatives of Ministries of Health, Environment and Water Resources, Local Government, RUWASA.</td>
<td>Initiator, Donor</td>
<td>-Set initial agenda</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community leaders (head of community, women and youth leader)</td>
<td>-Institute RAB democratically</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Corporate organisations</td>
<td>-Give public information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NGO leadership</td>
<td>-Convey objectives and strategy for implementation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Local experts,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Academic institution member</td>
<td></td>
</tr>
</tbody>
</table>
## Conceptual framework development for participatory water governance in Nigeria

### Primary goals of decision-makers

<table>
<thead>
<tr>
<th>State Actors</th>
<th>Non-state actors</th>
</tr>
</thead>
<tbody>
<tr>
<td>To minimize risk</td>
<td>To serve community interest</td>
</tr>
<tr>
<td>Meet legal/policy requirements</td>
<td>Give effective performance through the RAB</td>
</tr>
<tr>
<td>Maximize profit</td>
<td></td>
</tr>
<tr>
<td>Give effective and efficient performance.</td>
<td></td>
</tr>
</tbody>
</table>

### Key incentives for good performance

<table>
<thead>
<tr>
<th>State actors</th>
<th>Non-state actors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide expert managerial feedback in public policy process</td>
<td>Provide customer opinion</td>
</tr>
<tr>
<td>Provide price signals.</td>
<td>Water rate-payer opinion</td>
</tr>
<tr>
<td></td>
<td>Explore community norms and values</td>
</tr>
<tr>
<td></td>
<td>Provide shared goals</td>
</tr>
<tr>
<td></td>
<td>Give community opinion and evaluative reports</td>
</tr>
</tbody>
</table>

### Key sanctions for failure to maintain services.

<table>
<thead>
<tr>
<th>State actors</th>
<th>Non-state actors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declare financial loss</td>
<td>Explore political process via community elections</td>
</tr>
<tr>
<td>Explore community authority backed by coercion</td>
<td>- Ostracism</td>
</tr>
<tr>
<td></td>
<td>- Invoke social/family pressure</td>
</tr>
<tr>
<td></td>
<td>- Take-over of responsibility arrived at in consensus opinion</td>
</tr>
<tr>
<td></td>
<td>- Fines</td>
</tr>
<tr>
<td></td>
<td>- Litigation by both state and non-state actors</td>
</tr>
</tbody>
</table>

### Participation of actors

<table>
<thead>
<tr>
<th>Top-down</th>
<th>Bottom-up</th>
<th>Collective: top-down/bottom-up</th>
</tr>
</thead>
</table>

### Associated business model

| State government, Local Government Council, RUWASA. | Corporate organisation utility, Local Financiers. | Community co-operative. |

## Table 5.10: Stakeholders’ degree of involvement in participatory water governance

<table>
<thead>
<tr>
<th>STAKEHOLDERS</th>
<th>INVOLVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Health</td>
<td>They are all involved in decision-making, mapping, analysis and engagement</td>
</tr>
<tr>
<td>Ministry of Environment</td>
<td></td>
</tr>
<tr>
<td>Ministry of Water Resources</td>
<td></td>
</tr>
<tr>
<td>Local Government Council, RUWASA</td>
<td>They are both involved in decision-making, mapping, analysis and engagement</td>
</tr>
<tr>
<td>Corporate organisation</td>
<td>Involved in decision-making, mapping, analysis and engagement</td>
</tr>
<tr>
<td>Local experts</td>
<td>Involved in decision-making, mapping, analysis and engagement</td>
</tr>
<tr>
<td>Elected and appointed members</td>
<td>Involved in decision-making, mapping, analysis and engagement</td>
</tr>
<tr>
<td>Business organisation</td>
<td>Involved in the engagement strategy</td>
</tr>
<tr>
<td>Academic institution member</td>
<td>Involved in decision-making, mapping, analysis and engagement</td>
</tr>
</tbody>
</table>
NGOs, Community social organisations
Media organisation
Involved in decision-making, mapping, analysis and engagement, ensure that members interest and need are met in decision-making on water distribution

Individuals with interests representing themselves as land-owners
Involved in decision-making, mapping, analysis and engagement

General rural community members (Users of water). Also referred to as grassroots.
Involved at the engagement stage

<table>
<thead>
<tr>
<th>STAKEHOLDERS</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiator</td>
<td>Initiate reform, convey objectives and strategy for implementation, ensures monitoring, encourages evaluation.</td>
</tr>
<tr>
<td>Donors</td>
<td>Initiate reform, collaborate for project by funding/ provision of infrastructure.</td>
</tr>
<tr>
<td>Ministry of Health</td>
<td>Provide infrastructure, develop policy, train staff, represent state preference in RAB and provide educational initiatives.</td>
</tr>
<tr>
<td>Ministry of Environment</td>
<td></td>
</tr>
<tr>
<td>Ministry of Water Resources</td>
<td></td>
</tr>
<tr>
<td>Local Government Council, RUIWASA</td>
<td>Give support to state agencies, provide awareness</td>
</tr>
<tr>
<td>Corporate organisation</td>
<td>Provision of collaboration, information sharing</td>
</tr>
<tr>
<td>NGOs, community organisations</td>
<td>Information sharing, carry out campaigns, represent rural community interest</td>
</tr>
<tr>
<td>Individuals with interests representing themselves as land-owners</td>
<td>Initiate campaigns, protect their interest.</td>
</tr>
<tr>
<td>General rural community members (Users of water), i.e. grassroots</td>
<td>Carry out campaigns, provide infrastructural security. Provide support by participating in the management.</td>
</tr>
<tr>
<td>Academic institution member</td>
<td>Public awareness. Information provider.</td>
</tr>
<tr>
<td>Experts</td>
<td>Consultation</td>
</tr>
<tr>
<td>Media organisation</td>
<td>Dissemination of information</td>
</tr>
</tbody>
</table>

Table 5.11: Stakeholders’ role in participatory water governance

5.9 STAKEHOLDERS’ INTERACTIONS IN PARTICIPATORY WATER GOVERNANCE

Stakeholders’ inter-action with one another in a PWG may vary. It depends to a large extent on the interest, influence and power exercised. Their interactive actions are discussed in the following paragraphs.

Donors: Donors are usually partners in the supply of water and this research has exemplified a few of them (Chapter 5.5.1). They collaborate and interact with most of the stakeholders, based on their inquiry, beginning with the state actors for clarification. Where the Donors are the initiators of the project, they act as conveyors and mobilizers of the objectives (Briscoe and Ferranti, 1988).
State Actors: State agencies (as decision-makers and policy makers) influence the local government and RUWASA, who usually, carry out local duties based on set policies. The Local Government Council is involved in the water reform, but, their functionality in Nigeria is usually executed under political considerations (Aliyu, 1980). This has implications for potable water supply, detriment to the affected rural communities.

Corporate organisations: Generally, corporate organisations work in consonance with laid down policies (Frynas, 2013). However, majority of them are misguided by powerful community members in carrying out CSR, so that ‘divide-and-rule’ system, detrimental to communities’ interest ensues (Frynas, 2013). Avoidance of CSR is, thus, a common occurrence in Nigeria, resulting in community members’ conflict with their kinsmen and corporate organisations (Aghalino, 2009). Successfully getting them to support a reform in potable water management would require the astuteness and initiatives of the project initiator. There are instances when state governments sign memorandum of understanding (MOU) with corporate organisations, before commencement of operations. This is principally to ensure local context for purposes of employment and collaboration for projects (Frynas, 2000). However, where this has not been effected, the initiator may need to involve the corporate organisation in the PWG process right from the inception.

NGOs: NGOs are involved with all the stakeholders in one way or another, since they often channel initiatives by supporting community members, who are in need of social amenities (Willetts, 2006). Research evidence indicates that oftentimes, NGOs’ success depends on their understanding and responsiveness to local community needs and the balancing of social and institutional developments (Hailey, 2001). Thus, their inter-action is broad-based and usually, in purview as defenders of ‘voiceless’ rural community members. Clarification that NGOs may not
always be un-controversial or non-political is necessary (Willets, 2006). Thus, their impact varies from time and place and from one issue to another. However, collectively, they are capable of generating and supporting the complexities of socio-political change, which the PWG epitomizes.

**Rural community members:** Rural community members representing themselves as landowners are more concerned about how water supply may impact positively on their landownership. For example, they may resist installation of infrastructure for water supply upon their landed property, although they may welcome the reform for regular and un-interrupted potable water supply. Their inter-action with other stakeholders, is therefore, primarily based on self-interest (Bakker, 2003).

The inter-action of the general rural community members is to the extent of being assured of the provision of regular water supply. They are usually among the less privileged of the society, with little or no political powers, necessary as a lobbying tool for water supply (UNEP/IFAD, 2015). However, they welcome attempts, which ameliorate hardship, caused by lack of water supply (Gorsboth and Wolf, 2008). They are thus, easy to convince by the state and local government. They are consistent in their interest for campaigns, without clearly identified reasons for involvement or vision, other than a shadow of the promises given. Their attention and support for innovation sought by the initiator may be clouded by their propensity for the dramatic. Their campaigns on short and long term benefits in the change canvassed may be propelled by dire need for potable water supply. It would however, depend on how their leaders are able to impress them with convincing arguments (Louka, 2008).
Academic institution members: Members of the academic institutions usually possess astute, keen and impartial minds, which put them in good stance to quickly understand the socio-political dynamics at play for potable water supply (Adams et al., 2009). They are thus, able to consolidate the community’s position in the scheming, lobbying and political inter-play. They have the ability to inter-action with other stakeholders, consult and offer wealth of experience gathered from other places or from the internet (Bakker, 2003).

Experts: Local experts are seen as the bastion of knowledge (Philpott, 2015), which includes matters on water supply. Thus, they stand in the position of consultants and other stakeholders may seek technical clarification on how to effect the PWG (EPA 2003). This arises from their past experiences in similar procedures- specifically or generally in the supply of potable water, under the old system of management (Bakker, 2003).

Media organisation: The media organisation may play a crucial role in promoting coverage of issues pertaining to potable water supply (Sachchidananda, 1999). They exercise influence on other decision-makers and community members. They have capacity to communicate messages in a concrete way, by providing a platform for advocacy and influence in an effectively organized water supply (Sachchidananda, 1999). They therefore, have capacity to raise awareness on the importance of the participatory governance (UN Department of Economic and Social Affairs, 2014).

5.10 INDICATORS OF EFFECTIVENESS AND EFFICIENCY IN THE PARTICIPATORY WATER GOVERNANCE FRAMEWORK

Stakeholders mapping includes discussions on the protection of the sources and state of potable water. Efficiency and effectiveness should be addressed to ensure that the PWG is judiciously managed, using the principles of TAP, customary norms and values, laws and policies, including
the engagement of task forces. Where the issues involve unresolved matter, the Court is the last resort (Atiyah, 1995; Hart, 2012).

Stakeholder engagement strategy should indicate commencement and termination points in the water service coverage. Water consumption control may necessitate installation of tap heads, which promote efficient usage and conservation (EPA, 2003). Water metering is an option, which stakeholders may want to discuss. However, because water is economic goods, it may be advisable that some form of revenue is generated from water supply (Rogers et al., 2002). This may ensure effective servicing, such as payment of salaries, maintenance of infrastructure, monitoring, fueling, servicing of generator and security of gadgets and premises of the infrastructure (EPA, 2003). The piping of the community is a pre-requisite to an effective water supply (Clark et al., 2002). Therefore, consultation on how the community may be piped, either through the streets and into individual houses or at major points, not distant from home clusters are issues for discussion. These activities should consider the maximum limit of thirty minutes, in which users may walk before accessing water (UN, 2010). Installation of pipes to individual homes may be considered a better and cheaper option (UN, 2010). This may ensure effective metering, billing and collection of water rates, which should be affordable (CESCR, 2003)\textsuperscript{180}. Consideration in this regard should be given the financial performance of the users in the rural community.

Other sectors, such as education, health, agriculture and economics are inter-connected with the centrality of potable water to all facets of life (Muta’allellandendu, 2012). The impact has

\textsuperscript{180} General Comment 15, UN Doc E/C/2/2002/11
already been discussed (Chapter 2.2.3). The collaboration of corporate organisations, NGOs and Donors for PWG has already been canvassed respectively (Chapter 5.5.1).

5.11 PARTICIPATORY WATER GOVERNANCE CONCEPTUAL FRAMEWORK FOR RURAL COMMUNITY

The conceptual framework in this study, encapsulates a top-down/bottom-up representation (Figure 5.3). A broad spectrum of stakeholders, who are state and non-state actors are involved. They collaborate for effective and efficient management of potable water supply in rural communities. The pragmatic framework is intended to be put to practice in the effective management of potable water in the rural communities. This indicates a proposed reform of the government non-participatory top-down structure. The framework takes cognizance of the elements of good water governance earlier enunciated (Chapters 4.5) and involves the dynamics discussed in the following sections.

5.11.1 The Constitution

The Constitution as Nigeria’s basic law, is accepted as the platform and framework, on which all other laws are founded (Nwabueze, 1982). It reflects citizens’ ethos, consisting of their values and norms, belief system and cultural identification. As a grundnorm (Kelsen, 1945), the provisions of the 1999 Constitution\(^{181}\) are applied to the multi-sectoral Nigerian environment. It also provides for International treaties application, under domestication\(^ {182}\). The relevance of the constitution in the framework implies decision-makers’ constant reflection on the water laws and policies, identified within and not outside constitutional provisions (Rogers and Hall, 2003). Domesticated International Laws, are included in this reflection

\(^{181}\) Section 20
\(^{182}\) Ibid, Section 12 (1)
5.11.2 Federal Ministries and Agencies

The Federal Ministries of Health, Environment and Water Resources and all the potable water supply agencies are guided by the laws enacted by the National Assembly, under the authority of the CFRN. Potable water is managed, based on policies formulated by the Ministries. The policies are legislatively, authorized.

5.11.3 State Ministries and Agencies

The State Ministries of Health, Environment and Water Resources operate under the authority of enacted Federal Laws. They are also guided by laws enacted by State Assembly, as well as national and state potable water policies. The Agencies, such as the RUWASA take directives from the state ministries via the Urban Water Board. The agencies have guiding statutory laws, mainly concerned with administrative procedures (Federal Republic of Nigeria, 2000).
5.11.4 Rural Water and Sanitation Agency (RUWASA)

RUWASA provides potable water for rural communities, directed by the Urban Water Board, which is one of the state agencies (Kashim, 2012).

5.11.5 The Initiator of the Participatory Water Governance

The initiatives for a PWG process may not be limited to only a certain category of corporate or natural persons. Thus, anyone with capacity to ameliorate inherent potable water challenges, may initiate, provided there is capacity for funding, provision of infrastructure, technical or organizational knowledge (Swedish International Development Cooperation Agency, 2015). For example, federal or state governments, individual financiers, corporate organisations, NGOs or donating agencies may initiate water project (Harvey, 2007).

Initiators, such as donors have established important influence on water supply, which has been successfully implemented in various communities. Their relevance has already been canvassed (Chapter 5.5.1). They are therefore, within their purview in the PWG. The Initiator’s initial discussion and information is with the state ministries and agencies, while also acting as part of the decision-making body in the PWG process. Community interest is vital in the benefits accorded. Therefore, there should be information flow between the Initiator and the RAB ‘vice-versa’.

5.11.6 Decision-makers of Participatory Water Governance

Decision-making involves the fusion of stakeholders, consisting of state actors, who are the representatives of government agencies for potable water supply and the non-state actors, who are the rural community water users. The body of decision-makers is constituted by a broad spectrum of persons (Table 5.4). Primarily, the duty of the decision-makers is to plan for the
PWG process. Their comprehensive functionality has already been identified in the foregoing (Table 5.8).

**The Rural Advisory Board for PWG:** The RAB may be defined as the rural governance body for the management and supply of potable water. It is a governance constituted by community members for their own advantageous enjoyment of effective management and supply of the resource.

RAB consists of the Chairman, who is the leader of the board. The Chairman over-sees and co-ordinates all practical activities in conjunction with other RAB members; The Secretary ensures that meeting proceedings are documented and disseminated when required; The Financial Adviser directs disbursements by the financial task force and may be consulted to resolve financial issues; The Technical Adviser may be consulted for technical resolutions to challenges of water governance. For example, maintenance of infrastructure, laying of pipes, extension of water to new locations; Other RAB members are the Chairmen of community quarters, who are in the RAB in representative capacity and may be responsible for over-seeing task forces activities.

The RAB may be constituted by majority votes, in an election of the most suitable persons and conducted by decision-makers. The decision-makers consider certain qualities, such as, integrity, respect for the Rule of Law, comprehension of the dynamics of customary norms and values of the particular community; Interest in environmental preservation- particularly, potable water and the capacity of public trusteeship of collectively owned infrastructure.
The RAB’s role may be multi-faceted because, the governance is expected to reflect the social, economic, political and environmental dimensions of water governance. These are already given prominence in the study (Chapter 4.4). These dimensions may be achieved by the RAB in the following ways:

Socially, the RAB should initiate equitable distribution of potable water, in the various strata of the rural community, without discrimination by gender, disability, religion or geographical boundaries. Economically, efficient water allocation and usage has potentials for poverty eradication (Hutton et al., 2007) Thus, community members may be given the opportunity for a balanced living, while the women may be safer and more secure from the harassments, which non-availability of potable water may attract (Bigas, 2012). The children may be more regular in school (Brocklehurst, 2012), water borne diseases may be reduced (UNICEF, 2006) and the community may be a happier place to live in.

One of the highlights of participation is the provision of democratic empowerment, having nexus to political dimension. Thus, rural community members may be provided equal opportunity for expression of ideas, views and involvement in decision-making, without fear, favour or recrimination (Chociej and Adeel, 2012). This is of particular relevance in the RAB governance because, it supports human beings’ political aspirations for relevance in any matter of concern. Within the environmental consciousness, the RAB may provide sustainability of potable water supply, by an effective inclusive governance, which satisfies conscious efforts, directed in achieving environmental protection.

The RAB institutes a mechanism for accountability, taking into consideration the principles of TAP, advocated as guiding principles of decision-makers (Jacobson et al., 2013). TAP consists of the process or technique for achieving results (UNDP, 2013). The RAB members, thus, have an
obligation to accept responsibility and the capacity to account for actions taken in the PWG. Four tools, which may be explored in achieving the mechanism for accountability in the RAB administration are principles of TAP, laws and policies, community norms and values and task forces. These are techniques, which the RAB may explore effectively in the governance system and discussed in the following paragraphs.

**Rural Advisory Board (Transparency, Accountability and Participation):** The RAB should be guided by TAP principles (Chapter 4.5). Transparency connotes the ability to disclose correct information, allow information flow between and among the members, the community hierarchy and the decision-makers. TAP precludes secrecy in transactions pertaining to water supply. It directs the RAB to carry out effective record keeping and be accountable for responsibilities. The RAB should ensure that the rural community members are not excluded from the governance system. This may be achieved by formulating a schedule of duties, in which suitable community members should be allowed to participate. This procedure is intended to enthrone the concept of participation in the governance.

**Rural Advisory Board (Laws and Policies):** In PWG, recognition should be accorded the laws and policies guarding the water sector (Louka, 2008), under the direction of the ministries in Nigeria. The study has stated the functions of these relevant laws and regulations (Appendix 3). However, of particular relevance to the RAB governance are the National Policy on Environment (1989), Criminal Code Act (2004), National Water Supply and Sanitation Policy (2000), Environmental Impact Assessment Act (1992), Water Resources Act (1993), National Environmental (Food, Beverages and Tobacco Sector) Regulations (2009), National Environmental (Chemical, Pharmaceutical, Soap and Detergent Manufacturing Industries) Regulations (2009). The policies are those implemented by the institutions managing potable
water supply (Chapter 2.4.1 to 2.4.7). The RAB, in taking cognizance of the laws and policies, should ensure that the legal instruments are not prejudicially applied. This has implications for equitability (Chociej and Adeel, 2012) in carrying out responsibilities, guided by the Rule of Law (Hart, 2012).

**Rural Advisory Board (Community norms and values):** In various developing nations, land and water resources are regulated by a plethora of statutory instruments, regulations and Customary Laws (Rogers and Hall, 2003). However, Customary Laws are more depended upon for accessing potable water resources and in the resolution of arising conflicts (Natural Resources Institute, 2005). They also play important part in sustainability of potable water management, particularly in developing countries (Akpabio, 2011). However, in searching for an effective potable water management system options, the Nigeria traditional belief system, perceptions, attitude and reality are often undermined in favour of legislations. Kolajo (2000) argued that, long before the advent of the British as colonial administrators, Nigerian ancestors evolved a number of rules that governed their day to day relationships. They were unwritten, but they were nevertheless, acceptable as binding on all community members (Park, 1981). This implies that reforms in rural communities’ potable water supply may likely fail, when Customary Law options or contributions are rejected (Kolajo, 2000). This is as a result of the vital role of rural communities in environmental management and development, traced to their local knowledge and traditional practices (Elias, 1956). It is therefore important to recognise and support their identity, culture and interests (UNCED, 1992; Zebidi, 1998; Rogers and Hall, 2003). One potent rule is the community sanction strategy, in which several techniques may be explored.

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183 Principle 22
Community norms and values have anchorage in the traditional customary practises of rural communities in Nigeria. This is supported by the principle of good governance that, water governance should be in tandem with ethical principles, located in the communities or societies, where they are functioning. Thus, communities’ traditional rights are not disregarded (UNCED, 1992; Rogers and Hall, 2003).

The traditional custom of ostracism is identified as one of the sustained customary traditional methods of enforcement and compliance mechanisms (Uwazie, 1994; Igbokwe, 1997; Ewelukwa, 2002). Thus, voice ostracism may be imposed on violators of water rules. For example, failure to pay water tariff or for vandalising water infrastructure. Community members may be requested to avoid speaking with their member in breach of community water rules until fulfilment of obligations.

Trade ostracism (Griswold, 2000) is a method of sanction, where every community member is mandated to cease patronage or selling of commodities to a sanctioned member. Trade cohorts may also declare trade boycott on a member in breach, until the sanction is vacated, after the satisfaction of requirements. Peer group pressure may be invoked and cohorts of a member in breach may exert reasonable pressure on the member to fulfil sanction demands. Failure to fulfil sanction demands confers the status of ‘persona non grata’ on erring member and may reflect on the family. Family pressure may be explored by family members in exerting pressure on erring community member in breach of water rules, to fulfil sanction requirements. Where there is recalcitrance, the family bears the liability and inclusion in the ‘shame’ of disobedience.

Another sanction technique is payment of fines, awarded as punitive measures against violators of potable water rules. An instance could emerge, where there is unreasonable delay in
payment of water rates or intended and outright refusal to participate in cleaning up the infrastructure premises or wanton destruction of public infrastructure for potable water supply.

The community sanctions may not be absolute. This is because, project proposals necessitate the application of the Rule of Law (Jacobson et al., 2013). There is therefore, a focus on the improvement of equitable access to justice, which enables people, particularly, the poor and marginalized groups or persons, to claim their rights and services, as well as seek peaceful settlements of disputes (Jacobson et al., 2013). Where a member presumes there is a breach of rights, the community member may have recourse to the Court of Laws for resolution. A typical example is an infringement on Human Rights or perceived injustice in the supply of potable water (Hall and Lobina, 2012).

**Rural Advisory Board (Community Task Forces) (CTFs):** The CTF consists of community members with specific designation of duties. A cross-section of community members are assigned duties, so that the principle of participation is pragmatically reflected. They become accountable in their obligations and provide reports and information to the RAB. This encourages checks and balance, necessary for transparency. The following are the various CTFs and their functions (Table 5.12). The CTF members are directly answerable to the RAB through their leader, who may be any of the other members of the RAB, but who are Chairmen of the various quarters in the rural community. The RAB provides feedback to the initiator and primary decision-makers, who in turn pass information to the RAB when the need arises. Fundamentally, community members are protective of what generates common satisfaction and are altruistic in such matters. This is based on the age-old custom of participation, for even what would ordinarily be referred to as private matters. Rural community members are generally,
outspoken on most matters of welfare and willing information providers (Bigas, 2012). Thus, information on the governance may be no exception to the generality.

5.11.6.1 Advantages and Constraints of Rural Advisory Board
The usefulness of the RAB may not be absolute in the PWG, but, the advantages may outweigh the constraints, when collectively and deliberately nurtured in the participatory process. Progressive improvements may be identified, arising from gestation. The advantages have been discussed in the foregoing (Chapter 5.7.1). Constraints which the RAB may likely experience include inequitable provision of rules for payment of water rates, lack of technical knowledge, inadequate information dissemination, undue politicization of potable water supply, time constraints and funding challenges. These issues have been elaborated in the foregoing (Chapters 5.2 and 5.7.2).

Table 5.12: Community task forces and functions in participatory water governance

<table>
<thead>
<tr>
<th>TASK FORCES</th>
<th>FUNCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTF on finance</td>
<td>Members collect water rates based on contractual obligations with an accounting expert. They liaise with an established independent water tariff regulator at state level for the purpose of identifying and determining suitable and affordable water rates for community members. They pay salaries, directly provide money for maintenance of infrastructure, monitoring, fueling, security and regular supply of water.</td>
</tr>
<tr>
<td>CTF on Maintenance</td>
<td>Members ensure that the generator is regularly serviced, the water tank is periodically washed, serviced and the premises where the infrastructure is located, is well maintained.</td>
</tr>
<tr>
<td>CTF on supply of potable water</td>
<td>The CTF members pump water at regular but stated intervals and ensure that the frequency does not vary.</td>
</tr>
<tr>
<td>CTF on security of infrastructure</td>
<td>This action may be carried out by selected community members, to ensure safety of the infrastructure.</td>
</tr>
<tr>
<td>CTF on fueling</td>
<td>Fuel to power generator is regularly supplied and paid for by the CTF members, with funds from the financial task force.</td>
</tr>
<tr>
<td>CTF on monitoring</td>
<td>The members ensure conversance by monitoring the progress of the supply of water and give reports to the central RAB.</td>
</tr>
</tbody>
</table>

5.12 CHAPTER SUMMARY
This chapter contextualized the PWG within Nigeria and discussed the likely constraints in the development. The theory of collaboration was examined to establish the nexus between it and the participation of major stakeholders, who are likely donors in the potable water sector. The
capacity of various stakeholders was contextualized, identified and examined in the process of developing the framework. There was a focus on corporate organizations’ functionality for CSR and emerging theoretical and legal constraints. The role and legal constraints of NGOs as Donors were examined as collaborating stakeholders and in their connectedness with PWG. The PWG process was identified in phases of planning, while in justifying rural community involvement, envisaged constraints and mitigations were identified. The development of the conceptual framework for PWG was highlighted. The framework enunciated the different compartments from the federal and the state machinery under the guidance of the laws authorized by the constitution and fusing with the rural machinery for governance. The chapter discussed the rural potable water management as a governance system anchored by the RAB, with clearly defined mechanisms for accountability. The chapter discussed the RAB proposed exploration of TAP as guiding principles and the community norms and values, in which traditional sanction methods would serve for enforcement and compliance and, in which the services of CTF members would be required in achieving the effectiveness and accountability of the RAB. The chapter further discussed the conceptual framework and its reflection of laws and policies as relevant tool in the PWG.
CHAPTER 6: RESEARCH DESIGN AND METHODOLOGY

6.0 INTRODUCTION

The fifth objective is to review existing literature on the research methodology and reflect this on the research design. In furtherance of this, the chapter discusses the epistemological and ontological underpinning of the study. It presents the design and methodology and by rationalizing the adoption of the qualitative research approach, the collection and analysis of primary data may be enabled. Interview, comprising of semi-structured interview technique is identified as the principal research strategy. The purposive sampling strategy is presented as a preference, from which the homogeneous, heterogeneous and criterion techniques are adopted. An account of ethical considerations, associated with data collection activities is presented and Delta State of Nigeria is identified as the study focus. The thematic analysis is justified as the best option for the study, while the adopted validation strategies for subsequent inquiry, based on the study findings, are also presented.

6.1 RESEARCH PHILOSOPHY

Most researches reflect philosophical ideas as under-pinning, which remain largely obscured in the researches (Slife and Williams, 1995). In consideration of this fact, this study identifies the research philosophy in explaining the choice of research approaches.

Epistemology is the theory of how things are known, while ontology is the theory about the type of things in existence (Robson, 2011). Both terms have been referred to as ‘world views’ (Creswell, 2009a). They may also be termed as paradigms (Lincoln and Guba, 2000). Epistemologically, emphasis is laid on the ways the social world is interpreted by individuals in the qualitative approach, characterized by generation of theories, rather than testing and
Research design and methodology

verification (Creswell, 2009a; Bryman, 2012). This attribute is referred to as ‘interpretivism’. This is at variance with the quantitative approach, which dwells on the natural scientific model or positivism (Bryman, 2012).

Based on the philosophical interpretations, the qualitative approach is consistent ontologically on social constructivism, while epistemologically, it is based on interpretivism. The qualitative approach was adopted in the initial and subsequent inquiry. The approach was chosen for interpreting various participants’ perceptions. Berger and Luekmann (1967), Lincoln and Guba (1985), Mertens (1998), Crotty (1998), Neuman (2000) and Schwandt (2007) are credited with doing substantial work in this field.

6.2 RESEARCH DESIGN

Research design is the methodology and procedures, employed in conducting a study. It is the plans and procedures for research, which spans the decisions from broad assumptions to detailed methods of data collection and analysis (Creswell, 2009a). This ensures that the evidence available enables unambiguous answers to research questions.

A five dimensional framework for a research design was articulated by Robson (2011). The first component is the ‘purpose’ of the study, which asks what the research is trying to achieve. The purpose of this study is ‘to develop a participatory water governance framework to support potable water supply in the rural communities of Nigeria’. The second is the ‘theory’ guiding the study, on the conceptual framework linking the phenomenon being studied. It allows the findings to be understood. The broad theoretical framework of this study is ‘participation’. It is evolving in the conceptual framework development, which deals with management issues, supports the legal framework for potable water supply in Nigeria and specifically, for the rural
communities. The third consists of the ‘research question’, which the study provides answers to, within available time and resources. The fundamental question is ‘How can the participatory water governance framework be effectively used to support the legal framework for potable water supply in the rural communities of Nigeria?’ This is based on the research problem, which states that, ‘the current Nigeria legal framework supporting the supply of potable water has not been effective, primarily due to non-participation of a broad spectrum of stakeholders—particularly, the rural community members’. The fourth component is the ‘methods’ dealing with specific techniques used for data collection. They answer the research question and how the data may be analysed, to ensure trustworthiness. In this study, literature review provides theoretical underpinning pertaining to the challenges prevalent in potable water supply as well as a plethora of PWG processes. The method used to collect data is the semi-structured interview, while thematic analysis is used for data analysis. The fifth component is the ‘sampling strategy’, which deals with where, when and how the data may be located. The sampling strategy in this study is anchored on Delta State of Nigeria. The evidence of the truth in the inquiry on PWG is attained by the qualitative approach, in which the natural setting of Delta State and the participants dwelling there is explored. By using the semi-structured interview in the research design, the initial truth of the PWG framework under inquiry is identified, data is collected, coded and analyzed. The sampling strategy is the adopted purposive strategy. The heterogeneous, homogenous and criterion sampling techniques are explored for selection of participants. The conceptual framework refinement may be based on the findings, in line with participants’ perceptions, enunciated in the semi-structured interview. However, in establishing the final evidence to remove doubts and suspicion of bias, validation of findings from primary data collected may be executed. Although, there could be potential problems, such as participants challenging the interpretation or seeking to suppress a material or perception (Bloor, 1997), presenting the document to respondents may be regarded as valuable in guarding against researcher’s bias. After the validation, conclusions are arrived at and recommendations
made. The sampling design and adopted methodological procedure are hereby presented (Figure 6.1 and Figure 6.2).

Figure 6.1: Research design for inquiry used in this study
Research design and methodology

Figure 6.2: Procedure of research methodology used in this study
6.3 EXPLORATION OF QUALITATIVE RESEARCH APPROACH

In exploring qualitative approach, researches largely strategize by reference to words, rather than quantification in the collection, analysis and interpretation of data (Creswell, 2009a; Denscombe, 2010; Bryman, 2012; Silverman, 2014). Generally, the qualitative approach is inductivist in generating theory from particular (assumptions) to general themes, while the meanings of the data are interpreted (Creswell, 2009a; Bryman, 2012). However, sometimes, qualitative approach may be deductivist, when the researcher proposes a theory and data is collected to test the veracity of the theory (Silverman, 1993). This is akin to the quantitative approach, where theory assumptions are deductively tested (Creswell, 2009a). To buttress his argument, Silverman (2014) opined that all of these “depend on the research questions, which are inevitably theoretically informed”. The dichotomy of ‘inductive’ and ‘deductive’ researches have become controversial and may result in confusion and conflict. However, Robson (2011), sought to put the controversy in true perspective in arguing that-

“These connections are by no means universal. Fixed design research can be used for theory generation; qualitative flexible designs for theory verification... there is a place for both theory generation and theory verification approaches. Which is more appropriate will depend on the particular circumstances and context of your research. If an apparently serviceable theory, relevant to your proposed study already exists, the sensible approach is to test its utility”.

This same opinion had been earlier held by Hammersley (1992). In aligning with the views and by the adoption of the qualitative approach, the theory of participation emerged from the literature review. The conceptual framework development was based on this. There was also an interpretation of the meaning of the data. It emerged from interactive collaboration with the participants, through semi-structured interview, within their natural setting. It enabled the shaping of the emerging themes (Creswell, 2009a; Bryman, 2012).
Since the major themes emerged from the conceptual framework and the interview guide, before the data was collected (Braun and Clarke, 2006), there is an indication that this study is theory-driven rather than data-driven (Boyatzis, 1998; Braun and Clarke, 2006). Furthermore, the themes emerging from participation were checked against the data recursively (Creswell, 2009a), in the coding. This feature pinpoints qualitative research as an approach enabling complex reasoning skills throughout the research development.

The qualitative approach was conducted through intense contact with participants on the PWG framework, which may be regarded as a community life changing situation, interpreted by those involved in it (Miles and Huberman, 1994). This was enabled because, the ontology of subjective reality may be identified as the hallmark of interpretivism, as a philosophy. Within this, human conduct may be interpreted, based on people’s personal beliefs, values and experiences. In this regard, the qualitative approach may be identified as epistemologically fluid because, complex issues in the social world may be identified by those involved in it, within a contextual background (Knight and Ruddock, 2008; Creswell, 2013). The assertion on what the qualitative approach is, implies that, the touchstone of qualitative approach is the rendering of a holistic account (Creswell, 2013). The approach enabled complex reportage development emanating from multiple perspectives of complex interactions, existing in the study area. By properly highlighting them, doubts on research validity may be obviated. Thus, the participants’ contributions, which this study focused upon, are based on their various interpretations and perceptions of the PWG framework under inquiry and not the meaning brought into the study by the researcher. However, the researcher’s reflexivity, which is the conveyance of the researcher’s background is indicated in the qualitative approach. For example, the researcher’s experiences in terms of cultural background, work experiences, historical understanding, formed the interpretation of information received. Wolcott (2010) defended this by declaring that, “our readers have a right to know about us. They do not want to know whether we played
in the high school band, they want to know what prompts our interests in the topics we investigate, who we are reporting and what we personally stand to gain from our study”.

In the course of the problem description, interpretation, contribution and call for change, an emergent design unfolded. The initial conceptual framework development changed, as the field work on data collection progressed. This indicates the capacity for modification and flexibility in exploring the qualitative approach. The qualitative approach was also considered most appropriate for this investigative research because of its suitability for the argument on social justice (Creswell, 2013). Denzen and Lincoln (2011) gave primacy to this assertion, which was considered a useful anchorage for this research because of the PWG’s nexus with the theory of Human Rights and justiciability.

Ontologically described as constructivist, the implication is that, social phenomenon are the outcomes of interactions between individuals and not the phenomenon out there. They are, thus, separate from those involved in its phenomenon (Bryman, 2012). This is indicative of participants’ proximity to the participatory process (embedded in the community norms and values), under inquiry. It elucidates answers to the social problems of ineffective management of potable water supply. However, this has been a subject of criticism from advocates of the quantitative approach. They opine that, the qualitative approach may expose researches to bias and subjectivity. This is because, individuals hold varied and multiple meanings, which lead the researcher to seek complex views, instead of a narrowing of meanings into few ideas (Guba and Lincoln, 1989). Notably, basic differences exist between the social and physical sciences, since the methods used by one may be unsuitable for the other, in carrying out inquiry of a phenomenon.
6.3.1 Rationale for Adopting a Qualitative Research Approach

The qualitative research has inherent complex and multiple uses for inquiries. Several reasons may therefore, be adduced for adopting it as a suitable approach in this study (Table 6.1).

Table 6.1: Rationale for exploring qualitative research approach

<table>
<thead>
<tr>
<th>RATIONALE</th>
<th>EXPICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing problem</td>
<td>Existing problems were explored to identify the truth.</td>
</tr>
<tr>
<td>Measurement of variables</td>
<td>Variables defying measurement were measured with the approach (Robson, 2011).</td>
</tr>
<tr>
<td>Social justice</td>
<td>In providing a voice for the silenced voices to express their version, the truth was elicited.</td>
</tr>
<tr>
<td>Detailing of problems</td>
<td>Complex detailed understanding of issues was enabled by direct interactions with the people affected within their natural setting (Creswell, 2009a).</td>
</tr>
<tr>
<td>Empowerment</td>
<td>Individuals were empowered in sharing their stories without the encumbrance of pre-determined literature sources and information (Bryman, 2012).</td>
</tr>
<tr>
<td>Removal of formalizations</td>
<td>There is flexibility in the literary writing of stories of inquiry, removing the restrictions of formal academic structures.</td>
</tr>
<tr>
<td>Contextualization of phenomenon</td>
<td>Inquiry was contextualized (Robson, 2011) within Delta state as participants’ natural setting.</td>
</tr>
<tr>
<td>Explanation of linkages</td>
<td>Connections between causal theories were facilitated to provide general picture of trends, associations and relationships (Miles and Huberman, 1994).</td>
</tr>
<tr>
<td>Theory development</td>
<td>It was explored since theory on participatory process in Nigeria seems partially developed or inadequate in the explanation of the complexities of the issues being inquired about.</td>
</tr>
<tr>
<td>Inadequacy of quantitative measures</td>
<td>Quantitative measures and statistical analysis did not sufficiently suit the problem under inquiry (Miles and Huberman, 1994).</td>
</tr>
</tbody>
</table>

6.4 CHOICE OF RESEARCH APPROACH

The methodology explored in the study has been stated. However, due to perceived challenges, the best research approach to adopt has elicited debates in the past years (Creswell, 2009a). It has been argued however, that, no single research approach may be adjudged the best in comparison with others (Krueger, 1994). This is because, all methodological approaches may only be judged, by the merits of what they are explored for by the researcher. The basis for the adoption should however, be supported by evidence. Thus, multiple reasons have been provided by existing literature for selecting research approaches. They are- the research problem, the audience for whom the report is directed and the personal experiences of the researcher. These are further explained in the following sections.
6.4.1 The Research Problem

The selection of research methodology to address a research problem is dependent on the nature of the research problem (Silverman, 2014). The qualitative approach is adjudged most suitable for this study, as a result of emerging problems from non-participation in the Nigerian potable water management. The development of the PWG to mitigate the hardship occasioned by the problem is, therefore, important. This is because, the qualitative approach is exploratory. It was therefore, considered useful, since the research topic appeared not quite clear (deVaus, 2012) and little or no research has been carried out in Nigeria, on the PWG, emerging from the participation theory. Evidence from literature review, therefore, justifies the research problem (McVea et al., 1999). By focusing on the non-availability of potable water supply, due to ineffectiveness of the legal framework and the advocacy for collaborative structure in potable water management, it is expected that the social problem may be assuaged (Shiklomanov, 2002). There are, however, deficiencies in the evidence of research problems, as indicated by the literature review. This has arisen due to minimal research attention directed in Nigeria, towards adopting the PWG as a strategy that may be specifically created for potable water management. Furthermore, no data collection methods have been advocated by writers and scholars to suit the problem identified. Thus, in exploring the qualitative approach, there was contextualization of the problem by involving participants. The problems were better identified and clarified from the lens of those inhabiting the study setting of Delta State in Nigeria. Based on these, adequate data was collected, transcribed, analyzed and suggestions or recommendations were made (Creswell, 2013).

6.4.2 The Research Audience

Every study has its target audience that may accept and act on the research outcomes (Bryman, 2012). In line with this view, this study targets the civil servants in government (policy-makers/decision-makers, referred to as state actors), corporate organisations (private sector),
the NGOs, private financiers and Donors. Decisions that may be satisfactorily acceptable to them could be influenced by the audience experience, in the adopted qualitative approach. Thus, in defining the PWG from global and national perspectives, this study sought to advocate the improvement in potable water management with particular regard to rural communities. This was based on the development of the PWG framework, which is collaborative and inclusive in structure. However, although there was adequacy of existing literature on potable water management problems, the relationships in the structure contained scarce empirical evidence. In this circumstance, the qualitative approach was most useful for inquiry (Bryman, 2012).

### 6.4.3 Personal Experiences of the Researcher

The researcher’s reflexivity conveyed the researcher’s background in terms of ability to conduct interviews, cultural orientation, work inclination and the understanding of historical antecedents, relied upon for data interpretation (Wolcott, 2010).

### 6.5 RESEARCH STRATEGY OF INQUIRY

In adopting the qualitative approach for inquiry, its operationalization required clear practical definition. The methods used provided the data that answered the research question. The qualitative research approach has numerous designs - such as observations, documents, reports and interviews, which may be explored for data collection. This study investigated the theory of participation by interviewing participants, to gain insightful knowledge of their various perceptions, to arrive at a valid result.

### 6.6 ETHICAL CONSIDERATIONS

One of the relevant aspects of field research is ethical consideration (Bailey, 2007), which refers to the general principles of what ought to be done (Robson, 2011). Ethical consideration is
necessary in protecting the participants, their organisations and in gaining their confidence and trust. It promotes the quality and integrity of the study, while guarding against inappropriateness of conduct (Farell, 2011). Robson (2011) illuminates ethical consideration by providing some conducts that a researcher must not be found wanting. In recognizing these requirements, priority was accorded ethical consideration in conducting the study, right from topic selection, data collection and analysis to results dis-emination. This study poses no ethical problems because, it was conducted by ensuring respect and regard for participants’ confidentiality and integrity, with full information on the aims and objectives. It was ensured that their participation was based on voluntarism and anonymity, with an option to withdraw from participation if they so desired. The participants were engaged under an understanding that, data collected from them would be securely stored and the documents destroyed at the conclusion of study.

The participants expressed consent of participation by signing a consent form (Appendix 7). The interview questions were designed and conducted in the absence of threats, misguidance and deception (Bryman, 2008). Before contacting the participants, an ethical approval was requested for and granted by the University of the West of England Ethics Committee (Appendix 5).

6.7 DELTA STATE OF NIGERIA AS STUDY FOCUS

Delta State of Nigeria was used as study focus for the semi-structured interview questions. The state provides the best available example for applying the participation theory, due to its complexity in potable water supply accessibility and the accruing challenges. This includes the community based interests, rural norms and values, in which participation is traditionally practiced. The setting and participants were also considered appropriate for this research
Research design and methodology

(Creswell, 2013) because, the topic, customary law practices and peculiarity of the state provide complexities. They serve as representative example of the practical benefits of an innovative strategy, which participation theory may provide as well as the envisaged challenges.

Delta State is a place attracting several commentaries, literature and debates, due to its peculiarity as a turbulent, large and oil-rich land. However, it is handicapped by infrastructural development- notably, potable water supply. For example, 65% of the population living in the rural communities are faced with scarcity of potable water supply (Delta State Development Performance, 2014). It is also most suitable as a setting because, despite the abundance of freshwater and groundwater, there is scarcity of water due to pollution. The pollution is mostly from by-products of technological advancement (Ikoni, 2010). Institutional management strategy challenges, sets the state apart as representative of Nigeria potable water problems. This is arising primarily, due to lack of participation of non-state actors, whereas, community traditional norms and values compliment participatory process. The state represents the aspirations of most Nigerian communities to access potable water sustainably (Orisakwe and Frazzoli, 2011).

Delta State as one of the 36 states in Nigeria exists in a total land area of 17,698 km² (Delta State, 2015). It is situated in the Niger Delta region with approximately, 122 km of coastline bounded by the Bight of Benin in the Atlantic Ocean (Federal Republic of Nigeria, 2007). About one third of the area is swamppy and water logged. It is bounded by Edo State to the North and East by Anambra State, to the South by Rivers and Bayelsa States (Federal Republic of Nigeria, 2007). The Western boundary is formed by the Atlantic Ocean, while it is bounded to the North-West by Ondo State (Federal Republic of Nigeria, 2007). Delta State water resources include surface and ground water. The State has a wide coastal belt endowed with numerous rivers and waterways, forming part of the Niger Delta (Okonta and Douglas, 2003).
waters are the Rivers Ase, Benin, Escravos, Ethiope, Forcados, Jamieson, Niger, Ossiomo and Warri (Federal Republic of Nigeria, 2007). It is a generally low lying area, without remarkable hills and a major producer of 1/3 of the oil and gas in Nigeria (Delta State, 2015). Major oil industries are situated in the state, including refineries for oil and gas production, a petrochemical complex, liquefied gas plant and a steel complex (Federal Republic of Nigeria, 2007). The State is inhabited by about 4,098,291 million people (Population Commission, 2006), from the South, Central and North Senatorial Districts of 25 Local Government areas (Table 6.2).

Five distinct tribal ethnicities namely: Ijaws, Urhobos, Aniomas, Isokos and Itsekiris make up the State’s inhabitants. There is cultural affinity amongst the various inhabitants. These manifest in the belief and cultural systems- displayed during traditional festivals, religions, marriages, funerals, dances, folklores, arts and crafts and pattern of dressing (Delta State Development Performance, 2014). Flowing from the characteristics of Delta State of Nigeria described in the foregoing, the choice of participants for the first and second phases of the data collection was based on the uniqueness and complexity of participants’ experiences in the natural setting (Figure 6.3).

**Table 6.2: Delta State Senatorial Districts and Population**

<table>
<thead>
<tr>
<th>DELTA SOUTH</th>
<th>DELTA CENTRAL</th>
<th>DELTA NORTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bomadi</td>
<td>86,016</td>
<td></td>
</tr>
<tr>
<td>Burutu</td>
<td>207,977</td>
<td></td>
</tr>
<tr>
<td>Isoko North</td>
<td>143,559</td>
<td></td>
</tr>
<tr>
<td>Isoko South</td>
<td>235,147</td>
<td></td>
</tr>
<tr>
<td>Patani</td>
<td>67,707</td>
<td></td>
</tr>
<tr>
<td>Warri South</td>
<td>311,970</td>
<td></td>
</tr>
<tr>
<td>Warri North</td>
<td>136,149</td>
<td></td>
</tr>
<tr>
<td>Warri South West</td>
<td>116,538</td>
<td></td>
</tr>
<tr>
<td>Ethiope East</td>
<td>200,942</td>
<td>Aniocha North</td>
</tr>
<tr>
<td>Ethiope West</td>
<td>202,712</td>
<td>Aniocha South</td>
</tr>
<tr>
<td>Okpe</td>
<td>128,398</td>
<td>Ika North East</td>
</tr>
<tr>
<td>Sapele</td>
<td>174,273</td>
<td>Ika South</td>
</tr>
<tr>
<td>Udu</td>
<td>142,480</td>
<td>Ndokwa East</td>
</tr>
<tr>
<td>Ughelli North</td>
<td>320,687</td>
<td>Ndokwa West</td>
</tr>
<tr>
<td>Ughelli South</td>
<td>212,638</td>
<td>Oshimili North</td>
</tr>
<tr>
<td>Uvwie</td>
<td>188,728</td>
<td>Oshimili South</td>
</tr>
<tr>
<td>Ukwuani</td>
<td>119,034</td>
<td></td>
</tr>
</tbody>
</table>

6.8 DATA COLLECTION ACTIVITIES

In identifying the data collection process, this study relied on the data collection activities (Table 6.3), while the essential aspects of the data collection procedure is represented (Figure 6.4).

Table 6.3: Data collection activities used in the study

<table>
<thead>
<tr>
<th>DATA COLLECTION ACTIVITIES</th>
<th>STUDY FOCUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus of study (sites)</td>
<td>Delta State</td>
</tr>
<tr>
<td>Access and rapport issues</td>
<td>Searching for persons- insiders or ‘gatekeepers’ (Hammersley and Atkinson, 1995), who could facilitate access to research participants and enable data collection.</td>
</tr>
<tr>
<td>Purposeful sampling strategy (selection of individuals)</td>
<td>Who to select (employment of maximum variation) representing multiple perspectives. Specific sampling type was heterogeneous/homogeneous, in which participants shared similar background, yet emerged from different walks and place of life in Delta State. Criterion sampling availed for the criteria used in the selection.</td>
</tr>
<tr>
<td>Information collected (Forms of data)</td>
<td>Extensive forms in open-ended interview</td>
</tr>
<tr>
<td>Recording of information</td>
<td>Field notes in semi-structured interview, audio recording of the interviews.</td>
</tr>
<tr>
<td>Field issues</td>
<td>Gaining access to organisations, individuals and interview venues; The mechanisms of interviewing, particularly with regard to the equipment used for recording and transcribing; Ensuring that there is audibility in the interviews. Venue issues.</td>
</tr>
<tr>
<td>Storing data</td>
<td>Back-up copies of computer files by using the Google drive, One Drive and an external drive. Use of high quality voice recorders (Olympus voice digital recorder) for audio-recording information during interviews; Development of master-list of information gathered; Masking names of participants in data to ensure anonymity by using acronyms; Development of data collection matrix as visual means of locating and identifying information for study.</td>
</tr>
</tbody>
</table>
6.9 DATA COLLECTION METHODS

It is recognized that the methods of making enquiries is fundamental to the adopted methodology in a study. The qualitative data collection methods were explored in this regard. The different ways of qualitative data collection are discussed in the following sections.

6.9.1 Qualitative Interview Inquiry

Various methods may be adopted to satisfy inquiry—such as observation, administration of tests, the use of questionnaires and interview (Robson, 2011). However, in this study, interview sufficed in investigating what the participants thought, felt or believed. This is based on the investigation of the participation theory, which evolved in the PWG framework.

Interview is a series of steps in a procedure, which numerous researchers have advanced for use in inquiries (Kvale and Brinkman, 2009). It is one of the most widely employed social research methods of eliciting information from participants (Potter and Hepburn, 2005). It may
Research design and methodology

be used in combination with other methods in a multi-strategy design or multi-method approach (Lofland et al., 2006). As a powerful tool, it may clarify concepts when participants express ideas in their own way, by saying what is essential to them, while clarifying relevant issues in depth. In using interview, the researcher listens more, while speaking less, puts questions in a straight-forward non-threatening manner, eliminates cues that can lead response in a particular direction and generally tries to enjoy the event, while recording it (Miles and Huberman, 1994).

Interview may be administered via fax, telephone, online or face-to-face (Creswell, 2007). Where it is important to have an inter-personal contact, the face-to-face is most useful and may be a one-to-one or focus group interview, in which, while allowing the participants to emerge, the interviewer remains in control (Merton et al., 1990). Interview falls into three major categories namely: The fully-structured, un-structured and the semi-structured. The fully-structured interview (closed ended) is an inquiry commonly explored in survey researches, with the aim of ensuring that each respondent has the same questions in the same order, with fixed wording. Thus, answers can be reliably collected and comparisons made confidently (Denscombe, 1993).

Interview may also consist of the un-structured (open-ended) type used for social researches. It has the features of conversation- although they are more than just ordinary conversations (Drever, 2003). They are about assumptions and the understanding of the situations usually associated with casual conversations (Silverman, 2014). During the process, participants speak freely on their terms, about the social phenomenon under inquiry. They thus, provide a wealth of practical suggestions and advice (Lofland et al., 2006).
Semi-structured interview is identified in social researches and generally used for introduction of new ideas, in the course of interviewing the participants. It is thus, referred to as a tool for flexible and multi-strategic designs (Robson, 2011), in which open-ended questions are asked about specific topics. The use of interview may be justified, when the issues at stake are sensitive. A successfully executed semi-structured interview would therefore, require openness and honesty from the participants, who may be able to give privileged information (Denscombe, 1983).

6.9.2 Advantages of Qualitative Interview

Generally, interview is attractive to researchers because, it is advantageous in practicality and flexible in usage (Hammersley and Gomm, 2004). It may enable high level control of the process by providing an opportunity for close interaction between the interviewer and the participants (Lofland, 2006). Interview therefore, creates optimum in-depth information where there is accuracy of answers, speed and high response rate (Kitzinger, 1995). There is also flexibility in re-framing of questions and ample opportunity for an interviewer to seek further clarification of issues and details (Naoum, 2013). Other advantages are hereby stated (Table 6.4). These inherent advantages in interview have enabled researchers to regard them as reliable qualitative strategies for obtaining research data in the social sciences (Merton et al., 1990). Within the milieu, comparable data consisting of depths are yielded, since they are typically about thoughts and opinion (Denscombe, 2007). Based on these various reasons, this study adopted interview as a strategy in the qualitative approach, to examine the evidence of the social phenomenon of PWG framework under investigation.
Table 6.4: Advantages of qualitative interview

<table>
<thead>
<tr>
<th>ADVANTAGES OF QUALITATIVE INTERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexibility in ascertaining the truth of an investigation, in which multiple perceptions may be explored in the data collection (Creswell, 2013)</td>
</tr>
<tr>
<td>Triangulating with other methods to corroborate emerging evidence (Miles and Huberman, 1994)</td>
</tr>
<tr>
<td>Creation of validity (since data can be checked for accuracy and relevance as they are collected) (Silverman, 2013)</td>
</tr>
<tr>
<td>High response rate due to pre-arrangement and scheduling for convenience and location (Robson, 2011)</td>
</tr>
<tr>
<td>Creation of therapeutic effects, through the personal element involved in the method, which may be contrasted to other methods like questionnaire, observation and experiments (Creswell, 2013)</td>
</tr>
</tbody>
</table>

6.9.3 Criticisms and Defense of Qualitative Interview for Inquiry

Interview as a strategy for inquiry has been criticized, as lacking standardization (Gubrium and Holstein, 1994a). This raises questions of reliability and points at the relevant problem of bias (deVaus, 2012). However, a degree of professionalism is required, which does not permit arbitrariness, since it is identified with the researching of an issue. Furthermore, there is an implied agreement, that the researcher sets the agenda for the discussion and is in control of the proceedings (Creswell, 2013). Some critics allege that it is time consuming (Robson, 2011). However, the control of timing depends to a large extent on control and closure skills, displayed by the researcher in maneuvering and terminating the interview on schedule.

Interview is usually derided as a ‘soft option’ for data gathering (Robson, 2011), but researchers have discovered, that the designation is deceptive. This is because, interviews may not really be easy to use well, as a result of direct interactions with human beings, different human foibles and the issue of transcribing, codifying and analysing interview results. A further criticism is that, it may be increasingly difficult to obtain participants’ cooperation in certain fields (Hart et al., 2005). It is particularly so, when there may be issues of emotional outbursts, participants’ reluctance to expose historical and cultural antecedents of their communities (Weis and Fine, 2000). However, it is trite to say that all participants are entitled to careful preparation, which is one of the important discussions in the ethical consideration, attributed to field researches.
There should be “informed consent” to participate in the interview, traceable to the satisfaction of ethical consideration (Denscombe, 1998).

A worrisome problem in interview is that of effective manipulation of equipment (Bryman, 2008). Thus, recording and transcribing may inhibit successful coding and analysis, while participants may exhibit reluctance to be recorded. However, an early organisation of logistics, in the right direction can be made available to successfully avoid the pitfall, while a pre-recording ‘ice-breaker’ may put participants at ease (Creswell, 2013).

Despite the criticisms against the exploration of interview as a strategy for inquiry, there are merits. The most important attachment of interview as a tool for inquiry is its potentials for providing rich tapestries of highly illuminating presentations and perceptions (Denscombe, 1998). Within these, lines of investigation can be pursued, over a lengthy period of time.

6.9.4 Exploring the Merits of the Semi-Structured Interview

Semi-structured interview is also referred to as in-depth interview as a result of participants’ world view (Robson, 2011). It is usually flexible and consistent with participatory and emancipatory models (Gomm, 2004). It is used to understand how interventions work and how they may be improved. The attribute of the semi-structured interview consists of a combination of pre-determined set of open-ended questions, enabling exploratory opportunity for emergent themes or responses (Silverman, 2014). Notably, it does not limit participants to a set of pre-determined answers, unlike the structured interview, which does not allow promptings. This attribute allows participants, the flexibility of discussing and raising issues, previously not contemplated by the interviewer. This is made possible because, not all questions may be designed and phrased ahead of an interview. Questions not previously included in the interview
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guide may be asked, as the interviewer picks up issues, raised by the participants (Bryman, 2008). These advantages may be compared to the structured interview, which is rigorous, rigid and cannot be diverted (Silverman, 2015).

Semi-structured interview has been adjudged successful as a qualitative inquiry method, due to its co-operative profile for fact producing interactions (Gomm, 2004). In using this inquiry method, a framework of themes, which had been identified by the interviewer, prior to the interview, was drafted. Participants’ disclosure of their thoughts and feelings, regarded as private, enabled a better understanding of the PWG framework under inquiry. It therefore, provided insight into how participants viewed the reality. As a result of the open-ended interview framework, which allowed a two-way conversation, the semi-structured interview may, therefore, be regarded, as a tool for giving and receiving information, in this study.

6.9.5 Constraints to the use of Semi-Structured Interview

Criticisms have trailed the exploration of the semi-structured interview based on its dependence on the researcher’s skills for successful inquiry (Gomm, 2004). Another criticism is that participants may desire to vocalize what they suspect the interviewer wants them to say. In spite of these mis-giving, the advantages out-weigh the constraints and, since there is no method that may lay claims to a wholly professed acceptability (Krueger, 1994).

6.10 SAMPLING TECHNIQUES

Sampling is generally regarded as a collection of participants, who are expected to fairly represent the population (Denscombe, 2010). The probability and purposive sampling techniques are two major categories (Bryman, 2008). Their identification is based on what the research is all about, the relevance of the samples to the research questions and the research
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goals (Bryman, 2008). Probability sampling is predominant with the quantitative research sampling strategy, while the purposive sampling is a qualitative approach strategy, which this study anchored on in the first and second inquiries. In the course of using the qualitative design, more than one sampling technique may be explored (Patton, 1990; Bryman, 2008; Palys, 2008). This also applies to the purposive sampling strategy (Patton, 1990; Palys, 2008).

This study adopted the homogenous sampling, in which participants emerged from a uniform background. They lack potable water supply, but they are members of rural communities, in which customary norms and values are tools for community compliance, and for set down traditional rules. The heterogeneous sampling technique was also adopted because, the participants comprised diverse employment or occupation from the study setting of Delta State. The criterion sampling was another technique explored to determine how the samples were sourced from different groupings. For example, local governments, category distribution, in which participants may be identified. The third grouping is the designation, which recognizes the positions held by the participants. The purposive sampling technique was adopted in this study, because it is a non-probability form of sampling, not based on randomization (Paton, 1991). The choice of samples interviewed in the investigation of the PWG framework was dependent on the researcher’s judgment (Bryman, 2008). This is a fundamental principle for selecting samples in qualitative research (Bryman, 2008). The sample was not strictly based on representation or generalizability of the population being sampled (Bryman, 2008). Rather, it was based on a variety of participants, who differ from one another in key characteristics having relevance to the research interview questions. Another major reason for researchers’ avoidance of randomized sampling is in consideration of the dichotomy existing in the state of potable water resources in the Northern and Southern regions of Nigeria. This fact was buttressed in the foregoing (Chapter 2.1). The participants are members of the study focus area of Delta State, who discussed with commitment and exercised a reasonable amount of restraint of their
prejudice. The participants, thus, had relevance to the interview questions and since they share the same or similar background, there is homogeneity.

6.10.1 Sampling Techniques Adopted

All types of sampling in qualitative research fall under the broad term of purposive sampling (Patton, 1991; Sandelowski, 1995), from which Patton (1991) sifts out fifteen different types to show the complexity in qualitative sampling. Despite the complexity involved in obtaining a purposeful sample, a researcher must select the participants according to the needs of the research (Morse, 1991). Thus, three major issues have been considered necessary in this study (Creswell, 2013). They are-they: the participants in the sample, the sampling strategy and the size of the sample.

The participants in the Sample: Institutional managers of potable water supply in Nigeria have overt knowledge of express provisions of participation\(^{184}\), although, it has not been pragmatically instituted. Rural members are also conversant with traditional practices of participation and sanction methods emerging from the norms and values in their communities. This implies that, in adopting the sampling techniques, the research did not traverse newness in choice of participants. Selected participants shared similar background in terms of potable water sector challenges. Thus, they had experience (Creswell, 2013) of the concept of participation, as a culturally recognized and practiced phenomenon or as an un-implemented policy, in the legal framework\(^ {185}\). The participants therefore, possessed understanding and could


purposefully, provide wealth of experience on the PWG framework under inquiry. The following relevant lists of participants and the sources of information were sought (Table 6.5).

Table 6.5: Participants and sources of information in the sample

<table>
<thead>
<tr>
<th>PARTICIPANTS</th>
<th>SOURCES OF INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevant participants from major institutions (Ministries of Health, Environment and Water Resources, Urban Water Board and RUWASA) managing potable water supply.</td>
<td>The office of the Head of Service in Delta State. The office is in charge of all government institutions and the civil servants working there.</td>
</tr>
<tr>
<td>Relevant workers in corporate organisations (Oil related companies).</td>
<td>Documentation by the Ministry of Commerce and Industry on all industrial organisations and their workers, including the oil companies based in Delta State.</td>
</tr>
<tr>
<td>Headship of community business organisation.</td>
<td>Ministry of Commerce and Industry</td>
</tr>
<tr>
<td>Head of community.</td>
<td>The Ministry of Local Government and Chieftaincy Affairs.</td>
</tr>
<tr>
<td>Headship of NGOs.</td>
<td>Department of Social Welfare in the Ministry of Women Affairs</td>
</tr>
<tr>
<td>Headship of community social organisation.</td>
<td>Department of Social Welfare, Ministry of Women Affairs</td>
</tr>
<tr>
<td>Names from the academic institutions.</td>
<td>Lists from the institutions situated in the community.</td>
</tr>
<tr>
<td>Names of all registered Deltans in their localities (Grassroots members).</td>
<td>National Population Commission in Delta State with documentations according to local government of origin and ward level.</td>
</tr>
<tr>
<td>Names of Local Government Council members</td>
<td>Local Government Service Commission</td>
</tr>
<tr>
<td>Names of Customary Court Judges</td>
<td>The Judicial Service Commission in Delta State.</td>
</tr>
<tr>
<td>Names of media organisations</td>
<td>News Agency of Nigeria (NANS).</td>
</tr>
</tbody>
</table>

Sampling Strategy: The best considered samples for making the inquiry were participants from among those people with homogenous background in Delta State (Table 6.6). The study also selected participants based on heterogeneity. It was necessary to seek the perception of people from diversity of life placement (although emerging from a homogeneous background). This is because, the attraction in the participants’ sampling was, those with purposeful understanding of participation. This complements the argument that, the logic and power of purposive sampling is dependent on the selection of information-rich participants for in-depth study (Morse, 1991). This enables the researcher’ knowledge of issues centrally important to the research purpose from the participants (Patton, 1990). In support of this assertion, Morse (1991) opined, that the basis for the sampling strategy is on the qualitative principle of appropriateness. It requires purposeful sampling and selection of good participants who should be articulate, reflective and willing to share their experiences with the interviewer. Thus, the
participants were deliberately sought, so that the entire range of experiences and the breadth of the phenomenon under investigation may be understood (Morse, 1991). The major aim was the strategic sampling of those participants having relevance to the research interview questions (Bryman, 2008). This was based on researcher’s judgment with regard to typicality (Robson, 2011).

**Size of the Sample:** In order to reach the required number, the study adopted the criterion sampling, in which all the participants met the criteria of people having similar experiences (Hammersley and Atkinson, 1999). They could, therefore, contribute to the development of the PWG framework. The total number of samples was fifty-one participants. However, as the interview exercise progressed, there was an obvious need to also seek the participation of media organisations, since the issue of adequate information for an effective potable water supply was constantly recurring. Thus, the number of participants increased to fifty-four (Table 6.6).

Table 6.6: Criteria for selection of participants for semi-structured interview

<table>
<thead>
<tr>
<th>LOCAL GOVERNMENT: OSHIMILI SOUTH (OS) CATEGORY DISTRIBUTION</th>
<th>ACRONYM USED</th>
<th>DESIGNATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Organisation</td>
<td>CO</td>
<td>Oil related Company Member (n=1)</td>
</tr>
<tr>
<td>Rural Community</td>
<td>HC</td>
<td>Head of Community (n=3)</td>
</tr>
<tr>
<td>Rural Community</td>
<td>GR</td>
<td>Grassroots (n=4)</td>
</tr>
<tr>
<td>Local Government Council</td>
<td>LGC</td>
<td>Member (n=1)</td>
</tr>
<tr>
<td>Business Organisation</td>
<td>BO</td>
<td>Chairman (n=1)</td>
</tr>
<tr>
<td>Community Social Organisation</td>
<td>CSO</td>
<td>Chairman (n=1)</td>
</tr>
<tr>
<td>Academia</td>
<td>AC</td>
<td>Member (n=1)</td>
</tr>
<tr>
<td>NGOs</td>
<td>NGOE</td>
<td>Environmental Protection (Chairman) (n=1)</td>
</tr>
<tr>
<td>Ministry of Health</td>
<td>MH</td>
<td>Permanent Secretary/Director (n=1)</td>
</tr>
<tr>
<td>Ministry of Environment</td>
<td>ME</td>
<td>Permanent Secretary/Director (n=1)</td>
</tr>
<tr>
<td>Ministry of Water Resources</td>
<td>MWR</td>
<td>Permanent Secretary/Director (n=1)</td>
</tr>
<tr>
<td>The Judiciary</td>
<td>CCJ</td>
<td>Customary Court Judge (n=1)</td>
</tr>
<tr>
<td>Media Organisation</td>
<td>MO</td>
<td>Member (n=1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCAL GOVERNMENT: UVWIE (UV) CATEGORY DISTRIBUTION</th>
<th>ACRONYM USED</th>
<th>DESIGNATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Organisation</td>
<td>CO</td>
<td>Oil related Company Member (n=1)</td>
</tr>
<tr>
<td>Rural Community</td>
<td>HC</td>
<td>Head of Community (n=3)</td>
</tr>
<tr>
<td>Rural Community</td>
<td>GR</td>
<td>Grassroots (n=4)</td>
</tr>
<tr>
<td>Local Government Council</td>
<td>LGC</td>
<td>Member (n=1)</td>
</tr>
<tr>
<td>Category</td>
<td>Acronym</td>
<td>Designation</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Corporate Organisation</td>
<td>CO</td>
<td>Oil related Company Member (n=1)</td>
</tr>
<tr>
<td>Rural Community</td>
<td>HC</td>
<td>Head of Community (n=3)</td>
</tr>
<tr>
<td>Rural Community</td>
<td>GR</td>
<td>Grassroots (n=4)</td>
</tr>
<tr>
<td>Local Government Council</td>
<td>LGC</td>
<td>Member (n=1)</td>
</tr>
<tr>
<td>Business Organisation</td>
<td>BO</td>
<td>Chairman (n=1)</td>
</tr>
<tr>
<td>Community Social Organisation</td>
<td>CSO</td>
<td>Chairman (n=1)</td>
</tr>
<tr>
<td>Academia</td>
<td>AC</td>
<td>Member (n=1)</td>
</tr>
<tr>
<td>NGOs</td>
<td>NGOE</td>
<td>Environmental Protection (Chairman) (n=1)</td>
</tr>
<tr>
<td>Ministry of Health</td>
<td>MH</td>
<td>Permanent Secretary/Director (n=1)</td>
</tr>
<tr>
<td>Ministry of Environment</td>
<td>ME</td>
<td>Permanent Secretary/Director (n=1)</td>
</tr>
<tr>
<td>Ministry of Water Resources</td>
<td>MWR</td>
<td>Permanent Secretary/Director (n=1)</td>
</tr>
<tr>
<td>The Judiciary</td>
<td>CCJ</td>
<td>Customary Court Judge (n=1)</td>
</tr>
<tr>
<td>Media Organisation</td>
<td>MO</td>
<td>Member (n=1)</td>
</tr>
</tbody>
</table>

**Total Number of Participants (n = 54)**

### 6.11 INTERVIEW DESIGN

The interview design had flexibility to enable exploration of the phenomenon of PWG framework for inquiry (Lincoln and Guba, 1985). The semi-structured interview was designed in eight sections, addressed subsequently, while the interview guide was structured as shown (Appendix 8).

**Section A was a request for participants’ profile:**

In this section, information needed by the interviewer was participants’ currently occupied position and the name of the area/ministry/agency/ institution, in which the participants are functioning. Information about participants’ role in potable water supply was also regarded as relevant.
Section B focused on general questions as introduction to the conceptual framework for participatory water governance:

Participants’ opinion of the PWG framework was sought after the interviewer’s explanation of the framework and the relationships in it. The opinion of participants was sought on who should be referred to as decision-makers among the various stakeholders, while their views on who is an initiator were also deemed important. The participants were invited to give necessary information on the impact of donors, corporate organisations and NGOs in rural communities for effective water supply.

Section C focused on the Rural Advisory Board:

Information was sought on the best way for RAB selection, the role of the members, what the RAB can do in ensuring the sustained input of donors, corporate organisations and the NGOs. The opinion of the participants was also sought on the best way to effective management by the RAB.

Section D focused on the mechanism for accountability:

Participants’ perception was sought on who should be considered suitable to secure the infrastructure, pay salaries, ensure regular supply of water, collect water rates, maintain and monitor the infrastructure. The participants were expected to express their views on what they considered as the highest effect of the CTF and their perceptions of the measure of success of the mechanism for accountability. The participants were expected to give their opinion of the role of evaluation in defining the effectiveness of the RAB.

Section E contained questions on the payment of water rates:

The views of the participants were sought on the payment of water rates and the major barriers to implementation.
Section F contained questions on community sanctions:
The section was about what the participants may suggest as rural community sanctions and whether these may be considered as having cultural background and connections. The participants were also required to say what the major effects of the community sanctions would be when invoked.

Section G focused on the Court of Laws:
Participants’ perception was sought on what role the Court of Laws may play in protecting potable water supply and the circumstances, in which legal actions may be considered necessary when sanctions are invoked.

Section H contained the final questions:
The interviewer invited the participants on further relevant discussions to the inquiry. They were also invited to say whether they would like to receive a summary of research findings.

6.12 THE PILOT TEST
The primary purpose of pilot test in qualitative inquiry is to enable the refinement of data collection strategies, rather than the formulation of an analytic scheme or theory development (Morse et al., 2002). In accordance with this rule, the pilot test was carried out prior to the commencement of the initial inquiry. Two participants were interviewed for the purpose. Some issues were crucial to the effectiveness of the semi-structured interviews. They are:

Timing of the interview session: The interview was envisaged to last for an hour for each candidate. It was, therefore, important to identify whether the timing could be reduced to forestall boredom and restlessness from the participants. This was achieved when the
participants were interviewed within thirty-five to forty minutes each. Thus, no boredom or restlessness was discerned from the participants.

**Field challenges:** The effective use of the voice recorder was crucial. Any identified flaws were, therefore, corrected- for example, it was more prudent to back up the recorder to avoid the pitfall of recordings becoming corrupted and experiencing loss of documentations.

**Adequacy and clarity of the interview design:** The pilot test enabled the discovery that it was better to add two other important questions in Section D (13F) and Section D (16), which produced more robust answers from the participants. It also gave the researcher an insight into whether the questions were clearly stated and comprehensible to the participants. Although ambiguity may be necessary in the deliberate framing of certain questions, the pilot test enabled a reduction of ambiguity in the usage of words and phrases.

**Familiarization with Nvivo 10 as technique for coding:** The pilot test facilitated a needed familiarization with the NVivo 10 software. Arising challenges were quickly addressed before the initial inquiry. Familiarization provided adequate grounds for the mastery of the exploration of the NVivo 10 software. It also gave confidence on the manipulation of the inherent flexibility of the software to the researcher, so that, coding could be optimally achieved.

**6.13 THEMATIC ANALYSIS**

A major highlight of the thematic analysis is its compatibility with the constructionist paradigm, in which meanings and experiences are produced in the social milieu and expressed by individuals (Burr, 1995). When thematic analysis is conducted under the constructionist
paradigm, it focuses at theorizing the socio-cultural contexts and essential conditions, which promote the provision of participants’ perceptions (Braun and Clarke, 2006).

**Inductive and deductive usage:** Thematic analysis may be inductively (bottom-up) developed from particular to general themes, while the researcher interprets the meaning of the data (Frith and Gleeson, 2004; Creswell, 2009a). This implies that, there is a strong link from the theme to the data. The analysis is therefore, ‘*data driven*’ (Patton, 1990). In this instance, there may be no link to the questions, which the participants were asked, while the researchers’ theoretical interest may not be considered (Braun and Clarke, 2006). On the other hand, thematic analysis could also be deductively or theoretically (top-down) developed (Boyatzis, 1998). The deductive thematic analysis is theory-driven because, it is produced by the researcher’s analytic interest. A number of themes are expanded in identifying how a particular theme plays out in the data coded (Hollway, 1989) in relation to an established theory. The latter description was adopted in this study, arising from the investigating nature (Creswell, 2013).

**Whether it is a tool or method:** The thematic analysis has been identified as a data analytical process, used with qualitative information for identifying, analyzing and reporting the different themes in a data corpus (Boyatzis, 1998; Braun and Clarke, 2006). Some researchers have argued that, it should be regarded as a method in its own right (Braun and Clarke, 2006). This is because, it may be explored, to express reality and to explain the reality. Conversely, other researchers express a view, that it should be regarded as a tool and not as a specific method for analysis (Boyatzis, 1998; Holloway and Todres, 2003). They argued that, it is one of the few shared generic skills explored in qualitative analysis. Despite the dichotomy of views, the thematic analysis may be considered a researcher’s reliable process, due to its inherent flexibility in allowing thematic adjustments, reduction or expansion. It is thus, the descriptive form of data analysis. The researcher categorizes issues from the data corpus into themes and
patterns, showing similarity of views or perceptions, among the participants. By categorizing qualitative data into dissolved patterns and developed themes, it encodes the data (Boyatzis, 1998).

Advantages of usage: The thematic analysis is regarded as complex and not a clearly defined process (Holloway and Todres, 2003). It is however, flexible as a strategy for data analysis, with a rich detailing. This is because, apart from being a method, which organizes and describes data, it also interprets different aspects of a research topic (Boyatzis, 1998). It creates a pattern in seemingly random information (Boyatzis, 1998), which indicates conceptual flexibility (Strauss and Corbin, 1990). The main focus of the thematic analysis is the identification of themes, derived from patterns (Boyatzis, 1998). By exploring a rigorous process of data familiarization, data coding, theme development and revision, patterns were identified. Thus, the procedure provided answers to the research question being addressed in this study.

Constraints to use of thematic analysis: The thematic analysis is widely explored in the analysis of qualitative data (Silverman, 1993; Wolcott, 1994; Coffey and Atkinson, 1996; Mason, 1996; Boyatzis, 1998; Braun and Clarke, 2006). However, it is rarely acknowledged (Braun and Clarke, 2006). It has therefore, been faulted for lack of agreed definition and standard procedures for its conduct (Boyatzis, 1998; Braun and Clarke, 2006), but, a major advantage is the ability of using it to communicate observations, findings and interpretations of meanings. This results in a better understanding of the PWG framework under investigation in this study. Many researchers, such as Marshall and Rossman (1989), Crabtree and Miller (1992), Silverman (1993), Denzin and Lincoln (1994), Hollway and Todres (2003), used the thematic analysis to justify their researches.
6.14 RESEARCH VALIDATION

Research validation provides the steps that may be applied to improve existing procedures (Miles and Huberman, 1994). To validate is to investigate, check, question and to theorize (Kvale, 1989b). All the stated activities indicate and ensure rigour (Morse et al., 2002), while the touchstone is reliability. Hammersley (1992) posits that, reliability is the degree of consistency, with which instances are assigned to the same category, by different observers or by the same observer on a different occasion. The underlying question is whether, the study process is consistent, reasonably stable and may be used over time by researchers, who may adopt the methods (Miles and Huberman, 1994).

The doubts assailing the reliability and validity of researches in the past decades—notably in the 1980s has resulted in a shift for cognition in rigour during researching. Thus, the concept of reliability and validity, occasioned by research rigour, is applicable to all researches (Hammersley, 1992). It is as a result of the centrality of credible research outcome to every research (Hammersley, 1992; Yin, 1994). Reliability and validity are, therefore, applicable to the qualitative inquiry (Morse et al., 2002).

In the quantitative approach, rigour in researching is characterized by internal and external validity, reliability and objectivity (Guba and Lincoln, 1981). However, within the qualitative paradigm, trustworthiness is characterized by credibility, transferability, dependability and confirmability (Lincoln and Guba, 1985; Sandelowski, 1986). In view of these two perspectives, Creswell (2013), in elucidating further, argued that different writers use some of these qualifying words, interchangeably. For example, LeCompte and Goetz (1982) used similar qualitative nomenclature to quantitative counterparts in experimental and survey research. They levelled criticisms against qualitative paradigm, for failure to adhere strictly, to rules of reliability and validation. On the other hand, Lincoln and Guba (1985) used alternative terminologies, as
already stated in the foregoing. However, upon reflection of the use of alternative terms, nothing is gained from such expressed differences since they are often similar to the traditional terminologies of ‘reliability’ and ‘validity’.

Despite the shades of opinion on what constitutes reliability and validity, it is important that researchers use accepted strategies in documenting the accuracy of their studies (Creswell, 2013). It is equally more rewarding to focus on the processes of validation during a study, rather than the strategies establishing trustworthiness at the end of a study (Miles and Huberman, 1994). This is intended to avoid the problem of unreliability and non-validity of research at a late hour (Morse et al., 2002).

6.15 VALIDATING THE RESEARCH FINDINGS

At the conclusion of study findings, the relevance of reliability and validity of the study will be demonstrated by the process of validation of findings. A mixed method approach consisting of qualitative and quantitative strategies will be explored. In the adoption of the approach, it is germane not to regard the qualitative and quantitative approaches as “polar opposites or dichotomies” (Newman and Benz, 1998). The two approaches will therefore, be used in this study as “different ends on a continuum” (Newman and Benz, 1998). Thus, the study is exploring a qualitative priority, where emphasis in the use of the qualitative approach is greater than that of the quantitative approach (Creswell, 2011). This complements the statement by Creswell (2009) that, “a study tends to be more qualitative than quantitative or vice versa”.

The use of qualitative approach in the validation: The qualitative approach will be explored for the second inquiry, through the use of verbatim quotes as descriptive evidence, while linking the set-up and comments (Educational Foundations and Research, 2014).
The use of quantitative approach in the validation: The quantitative approach will be explored to understand the relationships among the variables by the use of survey questionnaire (Creswell and Plano Clarke, 2011). Thus, a major reason for using the quantitative alongside the qualitative in a mixed method approach is to facilitate the sampling (Bryman, 2006) of respondents in the validation process (Creswell and Plano Clark, 2011).

In validating the findings, techniques such as researcher’s determination of saturation point, descriptive perceptions, triangulation and respondents who are external to the initial inquiry and are experts in the field of potable water supply will be invited. This is to provide assurance for subsequent researchers, policy makers and readers, that the study is information-rich, reliable and valid.

6.16 STRATEGIES FOR VALIDATION

The strategies for validating a study are numerous. The following section reviews a few of them.

6.16.1 The Lens used by the Researcher

Perceptions from participants: The qualitative researcher may determine the research credibility by using the lens from the perceptions of participants, who participate, conduct or read and review a study (Creswell and Miller, 2000). Participants’ perceptions are information-rich and span their socio-political, economic orientation and cultural ethos. They therefore, provide answers to research inquiry, based on their setting and background.

Researcher’s length of stay in the field: It is also incumbent on the researcher to determine the credibility of the research by identifying the appropriate length of stay in the field of data
collection. This will be inclusive of an express statement of the role of the researcher in the research field (Miles and Hubberman, 1994).

**Prolonged engagement in the field by the researcher:** An extended stay at the field by the researcher may engender a relationship based on trust with the participants, while establishing rapport among the team (Fetterman, 1989).

**Researcher’s determination of saturation point:** The researcher determines when there is a saturation of participants’ information. The researcher has capacity to say whether good supporting themes have emerged, capable of evolving into the data, reflecting in the analysis and creating persuasive narratives to readers (Miles and Huberman, 1994).

**Triangulation:** Triangulation is a validity procedure, in which the researcher searches for a convergence among multiple and different sources of information, to form themes in a study (Creswell and Miller, 2000). Denzin (1978) suggested four different ways of triangulating a study. They are by multiple theories, used in a single research question; multiple methods, in which there is triangulation between and within methods; production of multiple data sets, in which there is a collection of different sets of data, through the use of the same method but explored at different times or with various sources; multiple investigations, in which the research is undertaken through partnerships or, by various teams rather than a single individual; disconfirming evidence, which is almost similar to triangulation. Negative evidence is searched for (from the themes), but the researcher uses his own lens and not that of the participants (Creswell and Miller, 2000).
6.16.2 The Lens of the Participants

Validity of study may be established through the participants in the study. Their perceptions are checked for accuracy of accounting. This is due to their representative capacity of the real world, in which they exist and, from where they were selected as samples (Creswell, 2013). Participants may collaborate to ensure that there is participation, devoid of marginalization. Participants may also be invited to participate in the question formation, data collection, analysis and writing of the narrative account (Creswell and Miller, 2000).

Member checking - The researcher takes the data and the interpretations back to the participants in the study, to enable confirmation of the credibility of information and narratives (Miles and Huberman, 1994). Member checking may be achieved through the focus group interview, participants may be called upon to review the study findings or to examine the raw data collected - such as the transcripts and field notes. They are invited to make comments on the accuracy of the study and if there is sense in it. The strategy has its challenges. It may prove difficult using member checking to validate, due to the financial obligations it may attract. It could be difficult for a researcher based in a university in the United Kingdom, to travel back to Nigeria for validation.

6.16.3 The Lens of Persons External to the Study

External validation is the process of establishing the extent of generalizability of research findings, in spite of variations in the settings, persons and research method adopted (Fellows and Liu, 2008). It is intended to enable confidence in research findings, which is capable of transforming findings to knowledge (Brinberg and MacGrath, 1985). People who were not a party to the initial inquiry may be involved in validation, to establish reliability and validity. Various means may be explored for achieving this:
**Audit trail:** This is the provision of audit trail, which records the methods and procedure adopted (Schwandt and Halpern, 1988). External persons are invited into the study. They examine the narrative accounts and may attest to the credibility. External persons may also review the study and identify the applicability of a conceptual framework to real life situation. They could also comment on issues considered important to the study but, which were not presented in the questionnaire. The aftermath of this is the researcher’s provision of feedback from external persons who are experts on the phenomenon.

**Peer debriefing:** This is the review of the data and research process by persons, based on their familiarity with the study or the phenomenon under study. Peer debriefing is a devil’s advocacy, supporting or challenging researcher’ assumptions. The researcher may be required to answer difficult questions on methods and interpretations explored (Lincoln and Guba, 1985).

**Descriptive accounts:** External persons may take interest in the presentation of rich, thick descriptions of the setting, the participants and the themes of the study, which should be presented in rich details to capture the thrust of the phenomenon investigated. Denzine (1989b) presented this dimension aptly that, “*thick descriptions are deep, dense, detailed accounts…Thin descriptions by contrast, lack detail and simply report facts*”. Thick, rich detailing of narratives, creates verisimilitude. They are statements appearing real, so that they produce in the readers, a feeling that they had experienced the narrated events or that, they are capable of experiencing them (Creswell and Miller, 2000). This kind of situation is from the constructivist perspective, in which there is contextualization of the phenomenon studied (Bryman, 2008).
6.16.4 Paradigm Assumptions/Lens

The researcher’s world view may govern the validity of the study (Ratcliffe, 1983; Guba and Lincoln, 1994). It is based on the constructivist interpretative approach, in which interaction with participants is necessary and there is pluralism of perceptions, elicited by open-ended interviews and contextualization of the phenomenon under study. Critical perspective marks another paradigm assumption, in which, the researcher unfolds the covert assumptions. The participants’ accounts undergo constructions, reading and interpretation, based on the social, political, economic, gender and ethnic backgrounds of the participants’ setting (Denzin and Lincoln, 1994).

6.17 CHAPTER SUMMARY

The chapter discussed the research design, while also describing the research methodology adopted towards addressing the research aim and objectives. The rationale for adopting a qualitative research approach to enable collection and analysis of primary data was provided. Principal research strategy for inquiry, consisting of semi-structured interviews was examined for potentials and constraints. An account of the ethical considerations associated with data collection activities was provided. While identifying the suitability of the purposive sampling strategy, reasons were proffered on the adoption of the sampling techniques. In discussing the thematic analysis of the interview transcripts, the chapter canvassed for the rationale in considering it as the best option for the research. The chapter discussed the rational for proposing a mixed methods approach in the validation process. The chapter reviewed some strategies for validating a study, to ensure reliability and validity.
CHAPTER 7: PRIMARY DATA COLLECTION AND ANALYSIS OF RESULTS

7.0 INTRODUCTION

The sixth objective is to collect and analyse primary data, to test the workings and connectors identified by the conceptual framework, with particular attention to the participation theory and the role of third parties. Pursuant to this provision, the chapter identifies thematic analysis as the touchstone of the data analysis. This is based on the inquiry for the participatory water governance framework, facilitated by the use of NVivo 10 software in the CAQDAS package. The dynamics in the analysis for coding is reflected in data reduction, display and subsequent conclusion. In doing this, the narrative of how the data was noded, coded, classified and queried is presented in the chapter. Matrices were used in the search for word frequency, based on the selected criteria of local governments, category distribution and designation of samples.

7.1 CODING BY USING THEMATIC ANALYSIS

Themes and codes in the study were developed on the platform of thematic analysis and organized into clusters of larger categories. The development was based on the conceptual framework (Boyatzis, 1998) for PWG, from where the interview guide emanated. Since the study is not based on generalisations or randomization (Creswell, 2013), descriptive use of thematic analysis was considered sufficient as a result of the adopted qualitative methodology (Wolcott, 1994). Descriptive thematic analysis is the most appropriate, due to the consideration attributed to the uniqueness of the study (Boyatzis, 1998).

Resulting from the adoption of the latent approach, in which the thematic analysis was used, underpinning ideas, assumptions and conceptualisations were identified (Boyatzis, 1998).
Themes development was based primarily on interpretation, while emerging analysis was theorized (Burr, 1995; Braun and Clarke, 2006). Data set was based on the organisation of themes into thematic clusters, due to related characteristics (McClelland, 1985). Patterns of word frequency in participants’ perceptions (dependent nodes) were identified to answer the queries. The analysis is stated in statements, in which matrices have been explored, to clearly illustrate participants’ perceptions in the data corpus (Appendix 9). Perceptions were located in the three criteria used- namely, the local governments, category distribution and designation of participants. The highest frequency was located within these three stated criteria. Analysis involved identifying the highest frequency of codes in a cluster of themes, the highest frequency of perceptions emanating from Local Governments participants and the highest frequency of perceptions from the category distribution and designation. These are indicated in the matrices.

An example of the description is hereby presented (Table 7.1).

Table 7.1: Summary of the effect of community task forces in participatory water governance (sub-theme) extracted from the thematic analysis on (major theme) community task forces in participatory water governance

<table>
<thead>
<tr>
<th>Dependent Nodes</th>
<th>RESPONSE BY LOCAL GOVERNMENT</th>
<th>RESPONSE BY CATEGORY DISTRIBUTION/DESIGNATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sources</td>
<td>Oshimili S.</td>
<td>Uvwie</td>
</tr>
<tr>
<td>Accessibility</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Compliance</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Easier governance</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Enforcement</td>
<td>22</td>
<td>8</td>
</tr>
<tr>
<td>Information</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Maintenance</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Monitoring</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Project acceptance</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Sanctioning</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Security</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>Success</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Sustainability</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 7.1: Summary of the effect of community task forces in participatory water governance (sub-theme) extracted from the thematic analysis on (major theme) community task forces in participatory water governance
Before the commencement of thematic analysis, the researcher had engaged in review of relevant literature to create sensitivity to the data corpus (Tuckett, 2005). In analyzing the transcripts of the semi-structured interview, the study relied on a guide in the stages provided by Braun and Clarke (2006) and Creswell (2009). The stages are, however, not unique to thematic analysis alone and may, thus, be used for other qualitative researches. They are stated as follows:

The first stage pertains to familiarization with the data. This was established by going through the entire data corpus recursively and by engaging in searches for issues of interest and possible relationships. There was no omission of any aspect of the data corpus. Creation of notes and identifying ideas for coding thereafter commenced.

The second stage focused on transcription of data, which is crucial to the phase of data analysis (Bird, 2005) and key to the achievement of an effective thematic analysis (Braun and Clarke, 2006). This process created better familiarization with the data. Thus, rigour and thoroughness were the hallmarks in capturing participants’ verbalized utterances in their true and original presentation.

In the third stage, transcripts were read several times to identify patterns of meanings and issues of potential interest in the data. It also identified the relationships in the data corpus, while familiarization process continued (Riessman, 1993; Rice and Ezzy, 1999). The researcher subsequently, collected phrases, words and segments relating to the research questions by using codes.

The fourth stage identified coding as an integral part of qualitative analysis procedure, in which segments were organized into meaningful categories (Miles and Huberman, 1994; Tuckett, 2005). They contributed in developing the best meaning out of the entire data- they are
therefore, the most basic element in the raw data. The developed codes serve as labels for words and phrases related to the themes and patterns in different sections of the transcripts. The codes were assigned to the extracts (phrases, words and segments), which are relevant to the research question.

Extracts were collated in the fifth stage and written under the codes, which were grouped under the themes, to reflect the interviews as a whole. Data extracts were collated under relevant themes. They were used to obtain a comprehensive discussion on themes and ideas, emerging from participants’ series of experience and perceptions. Titles of the themes emerged from words and phrases contained in the transcripts.

In the sixth stage, various classifications- notably, the source and node classifications were studied, while there was further re-distribution of segments, when it was required. A re-examination of collated extracts in each of the themes, with the original data, confirmed if a correct picture of the particular theme had emerged. Where they had, a re-labelling and re-naming was carried out where appropriate. The frequencies in the perceptions were stated by using matrices for easier interpretations (Appendix 9). Finally, various findings in the themes were interpreted, described and illustrated by relying on excerpts and verbatim quotations from the original data. Findings were discussed, based on the perceptions gathered during data collection. These were supported by literature review findings, the conceptual framework and interview questions. These activities enabled improvement and refinement of the conceptual framework and reflected in the contribution to knowledge.
7.1.1 Example of Coding for Word Frequency in Thematic Analysis

Results

Example of thematic analysis showing the result of frequencies for the effect of CTF in the PWG is discussed in this section (Table 7.1). The three local governments indicated are Oshimili South, Uvwie and Warri South. The acronyms used have been interpreted in foregoing chapter (Table 6.7).

Major Theme (Parent Node): Community Task Forces in Participatory Water Governance

Sub-Theme (Child Node) Effect of Community Task Forces in Participatory Water Governance

Interview Sources \((n = 54)\)

The most frequent perception for effect of community task force is enforcement from twenty-two sources. The highest frequency by criteria from local government area is Uvwie from ten sources. The highest frequency by criteria from category distribution/designation is rural community/head of community (HC), which emerged from four sources.

7.2 CODING METHOD ADOPTED

Coding scheme in a software manifests in the way codes are organized (Figure 7.1), within the software program and it is central to the qualitative approach adopted in this study. Data segments were placed together for the purpose of retrieval at a later stage. In the data coding, segments were identified as relating to a theme (Lewins and Silver, 2010). Coding facilitated the development of detailed understanding of the participatory process, in which a PWG framework emerged and which the data represents. This was made possible because, coding enabled the gaining of insight into underlying meanings, which participants attributed to the investigation of the PWG conceptual framework. It enabled a revisit of significant instances for the purpose of producing further insight. Coding also facilitated access to information about the participatory process contained in the data.
Primary data collection and analysis of results

Figure 7.1: The process of data coding used in this study

7.2.1 Coding with NVivo 10 Software and Justification

A uniform mode of data analysis may emerge from contemporary use of Computer Assisted Qualitative Data Analysis Software (CAQDAS) (Lewins and Silver, 2007). The Nvivo 10 software was used for data coding in the study because, the most effective means of data assemblage and interpretation is empirically analytic and not from sample-to-population. However, CAQDAS packages are not methods of analysis in themselves but, tools (Lewins and Silver, 2007). NVivo 10 software is important for analysing themes and storing relevant research documents in the CAQDAS packages. Thus, researchers in the social sciences depend on the tool, to enable reliable and valid research analysis (Bazeley and Jackson, 2013). By allowing a pragmatic approach to research analysis, the software produces clear, credible and verifiable meanings from data collected. The following stated reasons may be advanced for using Nvivo 10 software in this study.
Creation of auditable research: NVivo 10 software enables an auditable track of dialogues between a researcher and the data (Bazeley and Jackson, 2013). Questions on the challenges of transparency in research data analysis is either eliminated completely or minimized considerably.

Explicitness and reflection: The researcher is reflective and explicit on the analytic process explored in the research (Bazeley and Jackson, 2013).

Increased transparency: A new orthodoxy is identified in the emerging style, while exploring the data analysis through the results enabled by NVivo 10 software (Coffey et al., 1996).

Flexibility in NVivo 10 software: New opportunities are realized by the researcher, enabling convincing explanations in the data analysis (Bazeley and Jackson, 2014). The researcher explores the flexibility in NVivo 10 software to evolve fresh themes, by constantly reflecting on the transcripts. The software has the capacity to code, un-code, re-code, rename, delete, merge, group and assign different codes in a data set (Saldana, 2009).

Search and querying ability: A notable advantage of NVivo 10 software is the ability to speedily collect and display key words or phrases and similarly coded data, so that, the researcher can examine them (Lewins and Silver, 2007). This was considered relevant, due to time constraint for a lone researcher. Coding by using a software was necessary, because of the qualitative approach explored, in which thematic analysis had been identified as answering the challenge of emerging themes interpretation. This was also considered useful in dealing with emergent large data, which had data reduction possibility.
7.3 DATA ANALYSIS METHOD ADOPTED

Data analysis was based primarily on participants’ answers to open-ended questions in the semi-structured interview. The approach is identified with the thematic-based coding (Lewin and Silver, 2010). Emerging implicit and explicit perceptions from the semi-structured interviews were collected, transcribed, coded explicitly, analyzed and presented (Miles and Huberman, 1994), in a well understood way by exploring the thematic analysis process, which focused on examining themes in the data (Daly et al., 1997). Three major elements are explored in an effective data analysis. They are- data reduction, display, conclusion drawing and validation. The following paragraphs expatiate on these major elements.

Data Reduction: As an iterative aspect of qualitative data process, data reduction involves a continuum for as long as the study subsists, until final reports are created (Miles and Huberman, 1994). Various activities carried out for data reduction may be referred to as ‘Data Condensation’ because, they sharpen, sort, focus, discard and organize the data, which may eventually enable validation of findings and drawing of conclusions (Miles and Huberman, 1994).

Data reduction limited the huge amount of data generated in this qualitative research (Guest et al., 2012). Thus, it became more convenient to focus on specific themes already identified in the data for a particular analysis (Tesch, 1990; Miles and Huberman, 1994). While data reduction was used to extract interesting codes, it created a qualitative matrix showing frequencies in the coding (Lyerly et al., 2006). In this regard, data reduction techniques required minimal use of quantification, because of the large data (Guest et al., 2012). Although this may generate controversies in qualitative data analysis, quantification was not used elaborately, since it only related to the analysis and not the dissemination aspect of the research process (Guest et al., 2012).
Data reduction process commenced, even before data collection, when major themes (parent nodes) had evolved from the Interview Guide, which emanated from the conceptual framework for PWG. The process was further explored for the purpose of creating the transcripts, creation of sources, teasing out the participants’ perceptions (dependent nodes) from the transcripts, coding the texts and classifying the data into ‘sources and nodes’. All these further activities were carried out by using NVivo 10 Software (Figure 7.2).

**Figure 7.2: Systematic coding showing typicality of data reduction in Nvivo 10 software**

**Data reduction/creation of sources:** Sources are the research materials, which include documents, audio, video, pictures, memos and framework matrices (Lyerly et al., 2006). Semi-structured interview was the main source for this study. The series of interview was based on the recorded face-to-face multiple interactions with participants for the inquiry. The researcher was the interviewer, while the participants provided the answers to the inquiries. Audio interviews were reduced to transcripts, subsequently imported as an internal data item from Microsoft word into the NVivo 10 software framework. The transcripts provided meaningful interpretations, noding and coding. Voice recordings were not internalized into the software, so that data set is not compromised (Bazeley and Jackson, 2013). Sources
participants were presented under anonymity, due to ethical considerations and also indicates data reduction (Figure 7.3).

**Figure 7.3: Sources participants under anonymity in Nvivo 10 software**

**Data reduction/creation of nodes:** Nodes are containers for the coding (Bazeley and Jackson, 2013). Gathered related materials were kept in one place for the purpose of emerging ideas or patterns. After repeatedly reading the transcripts, some dependent themes relevant to the investigation of the PWG framework were identified. They were confirmed, based on linkages with major themes (parent nodes) earlier identified in the Interview Guide. Nine major themes emerged from the exercise, followed by twenty-seven sub-themes (child nodes) in the NVivo 10 software. These nodes are encrypted in the NVivo 10 framework and may not be obvious until de-encrypted by clicking on the ‘thematic noding framework’, which displays the various nodes under the ‘noding pane’. Initial map for the nine major themes are indicated (Figure 7.4).
map of developed major and sub-themes (parent and child nodes) are also represented (Figure 7.5).

Figure 7.4: Initial thematic map showing major themes extracted from the interview questions on participatory water governance conceptual framework
Figure 7.5: Developed thematic map showing major and sub-themes extracted from the interview questions on participatory water governance conceptual framework

Rich tapestries of participants’ perceptions (dependent nodes) were also noded. They numbered 242 themes. They are encrypted in the Nvivo 10 framework. When the pane for nodes is opened in the NVivo 10 framework and the participants’ column is linked, the interview
Primary data collection and analysis of results

pane is displayed, showing the coding of the nodes. The participants’ perceptions are hereby represented in the third column (Table 7.2).

Table 7.2: Participants’ perceptions of the participatory water governance framework

<table>
<thead>
<tr>
<th>MAJOR THEMES (PARENT NODES)</th>
<th>SUB-THEMES (CHILD NODES)</th>
<th>PARTICIPANTS’ PERCEPTIONS (DEPENDENT NODES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptual framework</td>
<td>Acceptable</td>
<td>Innovation, encourages accountability, equal partnership, inter-linkage, provides feedback, provides maintenance culture</td>
</tr>
<tr>
<td>Stakeholders</td>
<td>Decision-makers</td>
<td>Academicians, corporate organizations, decision boards, everybody, external donors, faith based organisations, government, individuals, initiator, medical personnel, NGOs, political class, RAB, rural community</td>
</tr>
<tr>
<td>Initiators</td>
<td></td>
<td>Community, corporate organisations, external donors, faith based organisations, government, Individuals, medical personnel, NGOs, public-private-partnership, schools</td>
</tr>
<tr>
<td>Rural Community members</td>
<td></td>
<td>Users of potable water</td>
</tr>
<tr>
<td>Potable Water Provision</td>
<td>Donors, corporate organisations and NGOs’ roles</td>
<td>Corporate social responsibility, decision-making, democratization of water process, implementation, initiate, liaise, maintenance, monitoring, National Economic Empowerment and Development Strategy, partnership, provision of experts, equipment, provision of funds, sensitizing, sustainability, training</td>
</tr>
<tr>
<td>Government role</td>
<td></td>
<td>Collection of water rates, decision-making, initiate water supply, maintenance of infrastructure, management of the scheme, monitoring of infrastructure, NEEDS assessment, payment of salaries, provision of funds, security of infrastructure, supply of water</td>
</tr>
<tr>
<td>Individual role</td>
<td></td>
<td>As an expert, as an NGO member, enlightenment, farming activities, licensing of private water scheme, litigation, monitoring, provision of water, researching for the supply of potable water, water development, water needs, water protection</td>
</tr>
<tr>
<td>Rural Advisory Board (RAB)</td>
<td>Effective management of the RAB</td>
<td>Authority, checks and balance, coercion, collaboration, commitment, constant meeting, creation of rules, enforcement, evaluation, good leadership, implementation of projects, information, maintenance, monitoring, planning, security, sustainability, training, transparency, accountability, participation, use of task force</td>
</tr>
<tr>
<td>Formation of the RAB</td>
<td></td>
<td>Selection, election</td>
</tr>
<tr>
<td>Roles of the RAB</td>
<td></td>
<td>Accountability, adherence to governing rules, advisory, advocacy, beneficial, budgeting, checks and balance, collaboration, collective responsibility, division of labour, effective management, enforcement, ensure success, implementation of projects, information, liaison, maintenance, monitoring, participatory, provision, rules creation, security, sensitization, supervisory, sustainability, to coordinate and organize, training, transparent management</td>
</tr>
<tr>
<td>Evaluation of the RAB</td>
<td></td>
<td>Information, responsibility, goal achievement, change, verification, correction, monitoring, improvement, performance assessment, sustainability</td>
</tr>
<tr>
<td>Good Water Governance</td>
<td>Transparency</td>
<td>Information, truth</td>
</tr>
<tr>
<td></td>
<td>Accountability</td>
<td>Credibility, normative values, periodic reports, project acceptance, record keeping, regular supply of water, sustainability, target achievement, transparency, and users’ satisfaction</td>
</tr>
</tbody>
</table>

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### Data reduction/creation of coding:

Coding is the process of identifying segments of data relating to a general idea, instance, category or theme (Lewins and Silver, 2007). The major reason for coding was the development of a detailed understanding of the inquiry about the PWG framework, represented by the data. By managing and ordering the qualitative data,

<table>
<thead>
<tr>
<th>Participation</th>
<th>Advisory, advocacy, collaboration, community involvement, corporate social responsibility, decision-making, enlightenment, equity, evaluation, expertise, funding, infrastructure, initiatives, maintenance, mobilization, monitoring, provision, training.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Task Force</td>
<td>Effect of Community Task Force. Accessibility, compliance, information, maintenance, monitoring, project acceptance, sanctioning, security, success, sustainability.</td>
</tr>
<tr>
<td>Mechanisms for accountability</td>
<td>Task Force: Collection of Water Rates, Decision-makers, donors, experts, finance committee, government, non-governmental Agencies, people with integrity, Rural Advisory Board, selected rural people, task force, water board.</td>
</tr>
<tr>
<td>b. Maintenance of infrastructure</td>
<td>Community members, Corporate Organisations, Decision-makers, Donors, experts, government, NGOs, RAB, task force, water board.</td>
</tr>
<tr>
<td>c. Monitoring</td>
<td>Community, everybody, experts, External donors, government, initiators, internal and external monitors, media, RAB, task force, water board.</td>
</tr>
<tr>
<td>d. Payment of Salaries</td>
<td>Corporate organisations, credible Individuals, decision-makers, donors, experts, government, NGOs, RAB, rural community.</td>
</tr>
<tr>
<td>e. Regular supply of water</td>
<td>All stakeholders, corporate bodies, decision-makers, experts, government, initiators, NGOs, power supply, RAB, task force, the community, water board.</td>
</tr>
<tr>
<td>Customary Norms and Values</td>
<td>Effect of Community sanctions, Adherence, change, compliance, corrective, dejection, deprivation, deterrence, discipline, enforcement, isolation, more commitment, rejection.</td>
</tr>
<tr>
<td>Varieties of Community sanctions</td>
<td>Community work, confiscation of property, depends on community, depends on offence, disconnection, fines, ostracism.</td>
</tr>
<tr>
<td>Community sanctions and cultural implications</td>
<td>Yes, no, I do not know.</td>
</tr>
<tr>
<td>Payment of water rates in PWG</td>
<td>Do not pay water rates, pay water rates.</td>
</tr>
<tr>
<td>Major Barriers</td>
<td>Attitudinal issues, bureaucracy, corruption, exemption from payment, failed promises by government, inability of government for provision, industrial pollution, irregular source of income, irregular supply, lack of accountability, lack of billing system, lack of enlightenment, lack of maintenance, lack of metering system, lack of monitoring, non-affordability, non-functionality of infrastructure, politicisation of water supply, poor service delivery, poverty, self-provision, vulnerability.</td>
</tr>
</tbody>
</table>
Primary data collection and analysis of results

coding enabled easier data search for similarities, differences, patterns and relationships in the inquiry on the PWG conceptual framework. Coding by using NVivo 10 software was, therefore, necessary, due to the large data generated. The data had fifty-four sources participants, identified as a key point in investigating the PWG framework. The open coding identified by Strauss and Corbin (1998) was considered the best option to adopt. This is because, small segments of the data were given detailed consideration, while comparisons were made with the other segments. The process is capable of generating large numbers of codes but, it was considered advantageous for opening up the data for better and clearer understanding. Since this research is anchored on the thematic analysis, the themes generated from the interviews were considered essential in identifying the frequency of word usage.

The initial coding activity on the major themes explored in the study was a “provisional” one, in which there was a start-list set of codes, prior to field work (Miles and Huberman, 1994; Creswell, 2007; Saldana, 2009). Layder (1998) encourages search activity for phrases, words and concepts, which may occur to a researcher, when contemplating a research investigation, before the collection of data commences. Creswell (2007), in corroborating the view, refers to this type of coding as “lean coding”. The codes were generated from the Interview Guide, originating from the conceptual framework and the research question, which evolved from the literature review (Saldana, 2009) (Figure 7.6). This may be regarded as a preparatory investigation (Saldana, 2009). With the commencement of the collection of qualitative data by semi-structured interview, the provisional coding in the data set was reviewed and expanded to include the sub-themes (child nodes) and the participants’ perceptions (dependent nodes).

When the pane for “Node” in the NVivo 10 software is opened and clicked upon, the thematic framework displaying all the nodes is shown. The transcripts, from where the nodes emerged, may also be accessed to show connectedness and reliability in the data collected and analyzed. The segments of coding per dependent node were identified. It was therefore possible to know
at a glance, the number of participants, (including their local governments and category distributions) that used the word coded, the similarities, differences and relationships encrypted.

**Figure 7.6: Process of codes generation for use in the Nvivo 10 software**

**Data Display:** Data display consists of an organized assemblage of information, which may enable action-taking and the drawing of conclusion (Miles and Huberman, 1994). The display of data allowed the researcher to carry out further analysis, based on a new understanding of the information gathered from the interview transcripts. The display of data consisted of matrices revealing causal relationships (Ragin, 1987; Miles and Huberman, 1994). They provided at-a-glance, insights into the participants’ perceptions. They enabled the next steps taken and a justification of conclusion, which subsequently followed. The foregoing descriptions in the paragraphs above are a component of data display, since the three ingredients already mentioned are usually interwoven. Further display of data in the NVivo 10 software in the study is classification, which are in two displayed compartments of ‘Source’ and ‘Node’. They are discussed in the following paragraphs.
Source Classification and Attributes: This is the recorded information about the research sources, indicated in matrix form. This indicates how the sources for the fifty-four participants were derived. The classification also gives the date, time (hours, minutes and seconds) and location of the interview sessions. This enables an auditable researching. Details of the source and the attributes are hereby represented (Appendix 11).

Node Classification and Attributes: Node Classification enabled the recording of information enhancing analytical ability, in which participants, who contributed to the coding are indicated. The different or same perceptions of participants from the various attributes namely- local government, category distribution and designation enabled easier identification for the purpose of valid analytical comparison (Appendix 12).

Queries: Queries enabled analysis of words and phrases in the source and node patterns identified, based on the coding. Queries generally indicate issues, which the researcher wants clarified and analyzed. In this study, the issues are contained in the participants’ perceptions (dependent nodes) specifically. They have linkage to the major and sub-themes (parent and child nodes) originated by the researcher (Table 7.2).

7.4 RELIABILITY AND VALIDITY CHECKS

The third element in the coding method adopted is validation and conclusion drawing. However, this aspect may not be discussed at this stage until Chapter 9 and 10 respectively. Thus, as a result of the importance of establishing trustworthiness in qualitative research findings, it is necessary to initiate reliability and validity, which were ensured at this stage, by reading the transcripts recursively, to avoid errors or mistakes (Gibbs, 1990). Coding was carefully cross-checked. This ensured the use of right codes in defining the collection of words, phrases and themes. Thus, NVivo 10 software as a tool, enabled reliability, validity of analysis and checks.
7.5 CHAPTER SUMMARY

The chapter discussed the dynamics of the thematic analysis as the touchstone of data analysis, based on the inquiry for the PWG framework. This was facilitated by the use of NVivo 10 software in the CAQDAS package. The chapter stated the processes in the analysis for coding, reflected in data reduction, display and subsequent conclusion, which will be addressed (Chapter 9 and 10) respectively. In doing this, the narrative of how the data was noded, coded, classified and queried was presented. Matrices were used in the search for word frequency based on selected criteria of three local governments, category distribution/ designation.
CHAPTER 8: PARTICIPATORY WATER GOVERNANCE FRAMEWORK INQUIRY: ANALYSIS OF FINDINGS

8.0 INTRODUCTION

The seventh objective is to appraise the findings emerging from the results of the primary data, based on the inquiry of the PWG framework referred to in objectives 4 and 6. In furtherance of this, the chapter examines emerging findings from the primary data results. Findings from data collection are analysed by drawing on participants’ perceptions. Thus, by examining emerging findings, express answers are provided to the research question: ‘How can participating water governance framework be effectively used to support the legal framework for potable water supply in the rural communities of Nigeria? In the chapter, the study findings provide linkages to the literature review, the conceptual framework and the interview questions.

8.1 REPORTING THE FINDINGS

In the study, various activities providing descriptive information were used to justify beliefs or actions, which involved rationalising to buttress claims (Miles and Huberman, 1994). There were also, explanations involving descriptions, which put a fact or law into interaction with others (Kaplan, 1964). This was to enable intelligibility of participants’ perceptions, which sometimes further needed to be explained. Events or actions were also explained in consideration of the causality, by referring to the internal or external conditions (Kruglanski, 1989).

Advantages of using verbatim quotes as excerpts from transcripts: The use of verbatim quotes has become the standard practice in qualitative researches. A major reason is that, research funders expect that reports should include direct quotations (Corden and Sainsbury, 2006).
Some writers have therefore, provided information of how the inclusion of excerpts from transcripts enabled clarification links between data, interpretations and conclusions (Corden and Sainsbury, 2006). In buttressing this assertion further, Spencer et al. (2003) examined and identified the use of verbatim quotes as evidential of research findings. The assertion was based on broad consensual opinion of other researchers (Beck, 1993; Greenhalgh and Taylor, 1997; Long and Godfrey, 2004). Corden and Sainsbury (2006) have also posited that, the use of excerpts, which are verbatim quotes from transcripts is advantageous in providing evidence of participants’ perceptions; illustration of participants’ view-points; evidence that the use of excerpts deepens readers’ understanding of the phenomenon under investigation; that they enhance readability of the study.

In furtherance of this, the study linked participants’ explanations with the ones developed by the researcher (Miles and Huberman, 1994), without the susceptibility of possible errors or mistakes, likely to cause bias (Gilovich, 1991; Goleman, 1992). Since the study is identified with the qualitative approach, which is naturalistic, the result of findings was presented in a descriptive, narrative form, deviating from a scientific report (Creswell, 2009b). Descriptions were thick to communicate participants’ perceptions. This study proffered explanations of findings by using the SQC model (Educational Foundation and Research, 2014) in stating the ‘set-up’ (i.e. the results of analysis); ‘quotes’ (i.e. excerpts from the transcripts) and ‘comments’ (i.e. explanations). The following sections elucidate the report of findings.

8.2 CONCEPTUAL FRAMEWORK FOR PARTICIPATORY WATER GOVERNANCE: PARTICIPANTS’ PERCEPTIONS

The most frequent participants’ perception of the conceptual framework is ‘acceptable’ (Appendix 9.1). Findings indicate that the conceptual framework for PWG was perceived as
having potential merits and represents the first step in bringing the ineffective water supply in Nigeria, back to normalcy. A participant said:

“My view is that, it is coming at a very timely occasion, because, it wasn’t always as bad as this. There was a time when water used to flow in almost all communities. Something definitely went wrong and, I believe that this initiative could be the first and very important step at bringing things back to normalcy and possibly, bringing about an improvement on the past records of when the average home had potable water supply” (BO-OS-P27).

The comment identifies the conceptual framework’s potentials in filling the existing gaps created by ineffective management of potable water supply in Nigeria. This is regarded as innovative. A participant commented that:

“It’s a good thing. It’s a good innovation, which should be encouraged” (CCI-WS-P14).

This statement results from the study’s notable deviation from the usual trend. Writers have criticised the top-down governmental management (Ogbodo, 2010, Orisakwe and Frazzoli, 2011), without stating how the dynamics of participation can be reflected in water governance at the rural communities. This implies that, poor management of potable water supply in Nigeria has been a challenge without remedial input. The contribution of the PWG conceptual framework to the body of knowledge is thus, expected to enhance sustainable policy planning, implementation and evaluation, in the water supply for the rural community members. The PWG Framework details how potable water can be effectively accessed and efficiently managed, based on the participation of a broad spectrum of stakeholders. The principles enunciated in TAP may be explored for that purpose. This assertion flows from a participant’s comment that:

“We have accountability, participation, transparency, the rural advisory board and taskforce. Transparency is that, everything been done is open and everybody must see it- nothing is hidden. In the participation, everybody must participate in all things been done” (GR-OS-P24).
The principle of TAP is broad-based and should accommodate a governance system linked to integrity. This may be borne out of disclosure of emerging issues, while interacting with the rural community users of potable water, who are beneficiaries of the system. This should be right from the inception of the PWG (Environmental Impact Assessment, 1992)\textsuperscript{186}.

There are indications in the findings that, equitable partnership (Huitema, 2009) between the initiators and the non-state actors may be enabled by the PWG framework. This should result in sustainability of water supply. A participant commented that:

"There should be equal partnership for all players in the community- both the initiators and the individuals in the community, to achieve a good sustainable water project" (CSO-WS-P11).

Equal partnership entails the right to democratic processes and expression of opinion stated in the 1999 CFRN\textsuperscript{187}. It is the right of community members to expect clean safe water for everybody- regardless of gender, religious beliefs, social status or geographical boundaries and provided for in the Constitution of the Federal Republic of Nigeria 1999 \textsuperscript{188}. Equal partnership signifies the rights of the aged and physically challenged people to potable water (WHO, 2014). While equitability enables proper decentralisation, new opportunities may likely emerge. They may be created for productive alliances among diverse groups in the rural community’s water projects that should foster good health (WHO, 2014). Partnership is capable of enabling recognition of special water and health problems of the rural poor, which militate against their ability to access safe water for food and security (WHO, 2014). Equitable partnership should support interventionism and collaboration from donor agencies, from outside and within

\textsuperscript{186} Section 7
\textsuperscript{187} Section 39 (1)
\textsuperscript{188} Ibid, Section 42 (1) (a), (b)
Participatory water governance framework inquiry: analysis of findings

Nigeria. It may also enhance effective access to relevant information, through direct initiatives and harmonious information collation (Prasad, 2007b).

From the findings, by creating an interlocking of relevant roles, state and non-state actors should play roles in ensuring an effective potable water supply in the rural community. A participant said:

“In my opinion, it is very essential, because, the framework is inter-linked and everybody has a role to play” (GR-UV-P39).

In the governance structure, everybody plays a role. The various roles of the RAB are linked to ensure inter-connectedness of ideas and plans. This is expected to foster the mechanism for accountability, so that community members are not alienated from governance. Those at the helm of affairs may also not be able to shut others out of their specific assignments. The community members should not be isolated from necessary information dissemination and gathering. Local knowledge, which is a powerful tool in the possession of rural community members, may be tapped by the stakeholders. The awareness of this may boost the rural community members’ confidence level because, they are involved.

The result of the structuring of the conceptual framework may be the encouragement of good feedback. A participant had this to say:

“Well, if we can have community participatory frame work, then, the problem of water supply would have been reduced to the barest minimum, because, what is ruining most of the water schemes in our rural communities (including my own), is lack of feedback” (HC-OS-P19).

The principle of TAP encourages information dissemination, within the enclave of the RAB members, between the RAB and the initiator and between the RAB and the government.
Information should internalise trust among the members and encourage the initiator or donor to continuously render support.

The findings show that the conceptual framework may enable the maintenance of potable water infrastructure. One of the participants said:

“It’s very good, because it is the community that is a beneficiary of any water project and it is good that they are involved, so that, they can always assist in maintenance of that project, because, the problem with Nigerians, is that, there’s no maintenance culture. So, the community should assist, in bringing about maintenance culture” (HC-WS-P3).

By paying genuine attention to details of water infrastructure maintenance, rural community members may be cultivating a much needed maintenance culture that should improve the community living standards and enable infrastructural sustainability.

### 8.3 INITIATORS OF PARTICIPATORY WATER GOVERNANCE

Analyses of the coding frequency indicate that ‘Non-Governmental Organisations (NGOs)’ emerged as the highest frequency for stakeholders, who may be considered as initiators of potable water supply projects. However, in the data analysis, several likely potable water initiators were also identified by the participants (Appendix 9.2). Evidence of findings shows that NGOs protect the unrecognized interests of rural community members in potable water supply, thus, alleviating their suffering. One of the participants said:

“NGOs- who on their own part, take up initiative by alleviating the sufferings of people at the rural level, can also be initiators” (BO-OS-P27).

NGOs are recognized for interventionism (Simpson and Fagbohun, 1994; Martens, 1999; Sklarew, 2005; Willets, 2006; Gotz, 2008). Among other environmental protection issues, they initiate water supply by advocating for voiceless rural community members. The perception
Participatory water governance framework inquiry: analysis of findings

thus, corroborates the literature review (Chapter 4.12.4). NGO interventionism may be carried out through planned advocacy, in which they argue for people’s rights to potable water supply (Coulby, 2015). They may also lead protests against perceived marginalization, oppression and disregard for equity in water supply (Council of Europe, 2015). Some initiating NGOs are external donors, who may promote sustainable water supply (Global Water Challenge, 2015). A participant commented thus:

“Then, other initiators include the NGOs- you may have them from the United Nations Development Program down to the UNICEF, WHO…” (AC-OS-P29).

Increasingly, it is becoming recognised that participation of citizens is critical to the ability of government to execute good governance. Therefore, when the government lacks credible institutional framework in addressing worrisome issues (for example, unavailability of potable water), persons such as the NGOs, who are regarded as unbiased, may play prominent advocacy roles in initiating and facilitating participatory activities (Sklarew, 2005).

From the findings, non-state actors in the potable water sector are also regarded as initiators. One of the participants said:

“... When it comes to talking about initiators, I believe here, in Nigeria (like we had the Niger Delta crisis), people agitated for something and government was able to respond to them. So, I believe the first initiators should be the end users. These particular rural people may cry out through the various media they have in their community that, they need water to survive or they have a need. So, once they make that noise, then, they have initiated through that action (AC-OS-P29).

This perception may be at variance with what is a typically of non-state actors. This is because, majority of rural members may be interested in the effectiveness of potable water supply and management, but lack the power, influence, financial and technical capacity (Table 5.5). However, by this latter perception, non-state actors, qualify to be referred to as ‘initiators’
when, by their agitations (borne out of high interest for potable water supply in their rural community), they succeed in receiving positive response from government in the supply of potable water facilities. The findings further indicate that, corporate organisations have capacity to initiate potable water schemes by exercising CSR. A participant commented that:

“We also have the companies. In a bid to exercise their CSR- that is, corporate social responsibility, they are initiators, because, what is lacked, what is faulty and what is not in a community- they try to capitalize on that opportunity to help. So, I believe that, they are a part of water initiatives” (AC-OS-P29).

Corporate organisations owe a duty to host communities in initiating social services, such as the provision of potable water facilities. This is in deference for the benefits derived from the environment. However, this must be reflected in the Objects Clause in the Memorandum of Association (Companies and Allied Matters Act, 2004)\(^{189}\) of the company or there should be an agreement that CSR may be executed in the interest of the company, which may likely face community opposition when it is missing in their agenda. This was canvassed in *Hutton v West Cork Railway Co.*\(^{190}\).

Participants regard government as having inherent capacity to initiate water schemes. One of the participants said:

“The initiator of the whole thing must be NGOs, government, corporate organisations and external donors (GR-OS-P23).

Generally, it is the duty of government to provide social amenities, such as potable water supply (Federal Republic of Nigeria, 2000). The Nigerian government sponsored the National Water Supply and Sanitation Policy (2000), aimed at providing participation for all. Its major objective is the provision of adequate, affordable and sustainable water for every Nigerian by 2020.

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\(^{189}\) Section 39 (1)  
\(^{190}\) [1883] 23 Ch D 654
Provision of water supply is thus, a tripartite responsibility of federal, state and local governments respectively (Federal Republic of Nigeria, 2000). However, in cognisance of the excerpts above, it is evident that the government is not expected to always be the sole initiator of potable water supply. This is because, the provision of social amenities has contemporaneously, progressed to collaborative involvement from other parties, who may act in support, by partnering and participating in the process.

It is notable that the predominant choice of NGOs as Initiators may be attributed to regular visibility of NGOs in most Nigerian social development projects. NGOs may also have been given the highest consideration, since they have a broad applicability by existing in most sectors, where they function contextually. Participants’ choice of NGOs as major institution for potable water initiatives does not obviate the initiatives of other institutions or persons in potable water projects (Appendix 9.2). This may be affirmed, when other options proffered in the transcripts are considered.

8.4 DECISION-MAKERS OF PARTICIPATORY WATER GOVERNANCE FRAMEWORK

The most frequently used phrase for decision-makers is, ‘Rural Community and Government’ (Appendix 9.3). Findings indicate that the rural community members and the government should participate in decision-making for the PWG. A participant said:

“The community people that really need that project, should be stakeholders as well as the people that are going to design and construct- that is, the government” (CO-UV-P35).

The perception confirms that, it may not be feasible for only the rural community to bear the burden of decision-making in potable water supply (Jansky et al., 2005). This is because, the supply of water is not cheap, either in terms of funding, infrastructural development or technical
knowledge (UNDP Users’ Guide on Assessing Water Governance, 2013). The government’s involvement, in fusion with the rural community members should ameliorate difficulties in this regard.

The planning stage of the PWG framework is crucial (UNDP Users’ Guide on Assessing Water Governance, 2013) for the future of the RAB governance. The non-state actors’ involvement as decision-makers in conjunction with the state actors may enable their input on what may augur well for their community. Two participants commented thus:

“Well, the community and the ministries should be the decision-makers. They should combine and take the right decision- the community should tell them what they want, so it should form part of their decision in the process” (HC-WS-P3).

“My candid opinion- even if it is the government that is bringing it in, the government should involve the communities- these are the beneficiaries” (HC-WS-P2).

This may be based on their experience and local knowledge (Sabatier et al., 2005). Findings further show that, there are other relevant persons who may be regarded as ‘Decision-Makers’. They are indicated in the matrix (Appendix 9.3). The matrix also reflects the connectedness of the two parties in nexus with other numerous decision-makers. However, rural community and government remain the focus-point, since the issue of water supply revolves around rural communities as beneficiaries, while the government is the benefactor.

8.5 RURAL COMMUNITY MEMBERS

Analyses of coding frequency indicates that, ‘Users of potable water’ emerged as the highest frequency for those regarded as rural community members (Appendix 9.4). Findings show that the phrase refers to rural community members, who may avail themselves of potable water supply. They are imbued, with inherent capacity for involvement in decision-making. A participant remarked that rural community members are:
“The end users of potable water, who would be participating with those who govern” (CCJ-OS-P34).

The implication is, there is no difference between the theme in question and the other terminologies used in the excerpts. The end users of potable water in the rural community of Nigeria are generally, the ‘voiceless’ people. They lack potable water supply, despite their inherent right of access (UN Human Rights, 2010). Their inability to access water stems from lack of power and influence, to lobby for the social amenity. This contraindicates the global declaration of water as a right for everybody. The UN Human Rights (2010) stated that, there are obligations requiring nations to ensure everyone’s access to-

“A sufficient amount of safe drinking water for personal and domestic uses, defined as water for drinking, personal sanitation, washing of clothes, food preparation and personal household hygiene. These obligations also require States to progressively ensure access to adequate sanitation, as a fundamental element for human dignity and privacy, but also to protect the quality of drinking-water supplies and resources”.

Thus, the resurgence of the rural community members’ rights to water may be adduced to global efforts, through the UN. Their capacity to participate in the governance for water supply may become enhanced by implication, as awareness of the rights improves.

8.6 DONOR AGENCIES: CORPORATE ORGANISATIONS AND NGOs’ ROLE IN PARTICIPATORY WATER GOVERNANCE FRAMEWORK

The most frequently used phrase for Donor agencies, such as corporate organisation and NGOs’ role is, ‘initiate water supply’ (Appendix 9.5). To initiate is to ‘begin or set going’ (Collins English Dictionary, 2011). Findings indicate that Donor agencies may serve multiplicity of leading roles in PWG. A participant said:

“Well, by ensuring that they take the lead, to ensure adequate water supply, to meet the needs of the rural area” (CCJ-WS-P27).
These institutions may initiate water schemes by several ways, which congregate under the highest word frequency. The perception corroborates the research’s conceptual framework, in which these group of persons may be counted among those regarded as Initiators of the PWG for rural communities. The perception complements the collaboration and participation theories, which may give support to the PWG (Ansell and Gash, 2001). This may also pave the way for potable water sustainability in rural communities.

8.7 GOVERNMENT’S ROLE IN PARTICIPATORY WATER GOVERNANCE

The most frequently used phrase on what government may do for participatory water supply is to ‘Initiate Water Scheme’ (Appendix 9.6). From the findings, government may initiate major basic amenities, such as water supply. A participant commented that:

“You have government participation” (MH-WS-P14).

This indicates that government participation implies the act of social amenities. However, participation may be interpreted beyond the ordinary meaning. It connotes the fusion of state and non-state actors in consultation, deliberation, planning, implementation and evaluation for the purpose of developing an infrastructure. For government’s action to be regarded therefore, as participatory, diverse interests should be recognised in decision-making (UN/IFAD, 2006). Participatory development seeks to involve rural community members in potable water initiatives, designed for their benefit and based on motivational consciousness that, the developmental project should have sustainability and be successful with local engagement (Cornwall, 2002).

Findings show that government’s role may be identified from specific projects that it is capable of executing. Such projects could be the construction of bore-holes for potable water supply. A participant said:
Participatory water governance framework inquiry: analysis of findings

“The government may help them by building a bore hole” (GR-OS-P24).

Such a project should be executed by considering existing laws and regulations. Thus, another participant said:

“Government can come in by ensuring that regulations for establishing the scheme are in accordance with the laws” (MH-UV-P48).

Nigeria environmental laws on water provision are generally not bad laws. In this regard, Dworking (1986) in his argument for Hart’s theory opined that, “the true grounds of law lie in the acceptance by the community as a whole, of a fundamental master rule”, which is regarded as a rule of recognition (Green, 2012). However, Nigeria laws implementation may be faulted (Ladan, 2012). This has been the major problem with water provision, in which the legal requirement for the participation of stakeholders (particularly, the rural users of water) has not been actualised. It is, therefore, necessary to identify what, where, when and how the rural members may exercise relevance, in the execution of such water projects (Environmental Impact Assessment, 1992).

Findings indicate that it is the duty of government to initiate potable water supply reflecting policies. A participant said:

“The government comes in the area of policy making” (ME-OS-P32).

Government policies should not be formulated in vacuum of participation, which is of paramount importance in policy directives (Environmental Impact Assessment, 1992). The National Water Supply and Sanitation Policy also provides for this. Wide information

191Section 7 and 22 (3)
1922000
dissemination, mandated legally for participatory activities, should enable stakeholders’ reaction to a proposed policy action at a meaningful time (Oludayo, 2004).

From the findings, the local government is expected to play a role by enabling potable water infrastructure maintenance, through the delegation of manpower. A participant said:

“The local government headquarters can supply the manpower to maintain the entire infrastructure” (HC-OS-P20).

As the third tier of government, the Local Government is, specifically, a governmental system closest to rural community members. However, local government delegation of powers has inherent implications in Nigeria. Delegation of workers for water infrastructure maintenance, may require funding for transportation and purchase of spare parts, where necessary. Delegation may be feasible, where there is a clearly stated mandate, in which such a duty may be regarded as part of official schedule. It may also be subject to express information, that incidental spending may be funded from over-head office expenditure. However, existing reality indicates that contemporarily, Local Governments in Nigeria are constrained in paying workers’ salaries, nor are they able to execute viable developmental projects (Oviasuyi et al., 2010). Most State Governments are therefore, compelled to support by funding Local Government workers’ salaries. This inadequacy has caused conflicts and division between the workers and the Chairmen/Councillors. Request for funding maintenance, may thus, constitute more friction and difficulties, resulting in PWG un-sustainability. However, Local Governments may best serve a useful purpose by playing supervisory role, through the monitoring of potable water infrastructure maintenance process. The suggestion is that maintenance should be funded from the water tariff collected from users of the infrastructure (UNDP/IFAD, 2015).
Findings show that government may initiate water projects by providing funds. A participant opined that:

“Government can come in and offer funding” (HC-OS-P21).

Funding may be for different purposes-for example, the payment of money, due to contractual agreements for water projects, workers’ salaries, maintenance of infrastructure, security, fuelling and provision of money for general expenditure (such as the purchase of stationery). Generally, Nigerians habitually expect that government is obliged to provide all the above mentioned facilities. However, there are implications in government executing these functions, without putting some checks and balance system in place. These may prevent unjust enrichment (Legal Dictionary, 2015) by few individuals, emanating from inflated contracts or un-executed, but approved payments for such contracts. Unjust enrichment may also be from other fraudulent practices, such as diverted funds for personal gains (Legal Dictionary, 2015). PWG connotes entrenched involvement of facility users, implying that, mechanism for financial operation is close to them. Thus, management of funds may be a part of RAB role and checked through delegation of powers to the task force in that regard. Government may provide funds from reverted money, collected from water tariff. This may serve as internally generated revenue (IGR), reverted and used for community members benefit. This may be likened to the toll-gate fees, collected from citizens and utilised for the purpose of road repairs, traversed by same citizens.

From findings, government may initiate water scheme by accepting to pay the salaries of workers. A participant said:

“Government should be responsible for salaries” (GR-WS-P8).
Prompt payment of salaries, may encourage workers’ dedication and commitment to primary assignments. The improvement of workers’ financial capacity implies enhanced purchasing power and confidence development is fostered. However, in saddling government with such responsibilities as payment of salaries, the source for funds generation should be identified. For example, government may pay workers’ salaries from revenue generated from water tariff, while government provides only payment machinery. The preponderance of doubt comes to play, where consumers of water refuse, avoid or neglect to pay their water rates. These are major issues that should be for decision-making during the planning stages for the PWG.

**8.8 INDIVIDUALS’ ROLE IN PARTICIPATORY WATER GOVERNANCE**

This theme principally addressed individual participant’s functionality and relevance in the water sector. ‘Water Needs’ emerged as the highest frequently used phrase (Appendix 9.7). From the findings, water needs may be served by individuals in their legislative capacity, within ‘Legislation’ and ‘politics’ purview. A participant commented thus:

“Politics and legislation, are part of the business. As a legislator representing my community from the grassroots level, I should report our needs, our pains—how they arise and when necessary. Currently, water has been a major problem in the third world, particularly among the grassroots in the rural areas of Nigeria.” (GR-UV-P42).

Globally, politics is discernible in the water sector (Ohlsson, 1995; Kaika and Page, 2008; Mitchell, 2012). It also resonates in Nigeria with an inter-twining of legislative enactments (Simpson and Fagbohun, 1994). Some of the enactments, such as the Land Use Act\(^\text{193}\) may have implications for land and water supply This is because political economy of potable water supply is firmly anchored by the concept of property (Mitchell, 2012). While property connotes

\(^{193} 1978\)
traditional collective rights to land, it is however, obviated by the right of government to administer claims to lands under trusteeship, empowered by the provisions of the LUA\textsuperscript{194}. This issue was addressed earlier on in the research (Chapter 3.2.4).

Within the interwoven concepts of legislation and politics, lie the relevance of water needs, expressed by the participants. This is within the many vistas of their functionality and in their connectedness with water resources. Water takes the centre page in all sectors, but, politics and legislation in serving dual purposes, may also instigate conflicting interactions. Thus, in seeking to effect the protection for water resources, legislative provisions are often subjected to politicisation process. This is particularly discernible in matters of water pollution by oil companies and the inability of government enforcement mechanisms to stem the act (Azaiki, 2009). The recognition that law does not just consist of a system of rules, but one serving several purposes (Hart, 2012) is important in this regard. It is the production of justice, enabled by legislation that is thus, the centre of its relevance (Hart, 2012).

Findings show that individuals’ roles in the potable water sector may reflect in their performance in ensuring human welfare. One of the participants commented that:

“\textit{We have to deal with the human welfare that is around us}” (BO-UV-P44).

‘\textit{Welfare}’ connotes aid in the form of money or necessities for those in need (Merriam-Webster Dictionary, 2015) and reference to it lies within potable water supply context. Therefore, contemplation for the welfare of those unable to access water supply is necessary in participatory governance to reflect Human Rights (Chapters 4.10, 4.11 and 4.12.2). Welfare programs may emerge as a result of community members’ financial incapacity, physical

\footnote{194}{1978}
disability, old or tenderness of age. Humanitarian act of welfare thus, compliments human stewardship articulated by Jeremy Bentham (1832) and championed by Leopold (1949). Such acts are based on anthropocentric ethics (Palmer, 2006) (Chapter 1.11). The act of welfare is thus, consistent with the declaration that water is indispensable for vesting lives with human dignity and a pre-requisite for the realization of other Human Rights (Sultana and Loftus, 2012).

The right to water is the right of everyone to sufficient, physically accessible and affordable water, for personal and domestic use. An act of kindness to realise inherent water rights may, therefore, be regarded as an act supporting human stewardship (Bentham, 1832).

Findings show that, individuals play a role serving ‘water needs’ when their organisations are involved in programs and projects pertaining to potable water supply. A participant said:

“*The members of my organisation and all the programs and projects we are doing, involve water*” (CSO-UV-P45).

The importance attached to potable water sector, reflects in every sphere of life and human endeavours. Its protection and the search for its sustainability has, therefore, become a challenge. Many international, national, local organisations and individuals have however, accepted the challenge for amelioration. For example, one may observe school children water-vendors, pushing carts in Nigerian cities and trekking long distances searching for water or taking turns in queues to fetch water. The educational deprivation of such children, arising from scarcity of potable water, is a challenge for social organisations, who, as voluntary workers, consistently intervene in such matters. Thus, in Nigeria, community social organisations often carry out programs to ameliorate water supply scarcity.
Findings further show that individuals may serve water needs by involvement in agricultural production and processing. A participant commented that:

“My role is related to potable water supply, because, I need water in everything I’m doing, such as farming and in garri processing. Water is what we need and without water, we cannot do anything” (GR-OS-P23).

The rural community members are mostly agrarian by orientation (George, 2006) and may be distinguished by the volume of farming activities, dependent on the exploitation of lands. The lands were originally abundant in natural resources, but these have progressively diminished in quality and value, due to deprivation from social amenities and degradation by anthropocentric factors. Rural community members’ economic independence rests on their water needs for agricultural purposes, which are difficult to realise, due to scarcity and pollution of the resource. Frustrated into abandoning the land, they migrate to the cities. However, the cities do not hold the answer to water scarcity and pollution, due to over-population and limited employment opportunities (Fannon, 1963). The writer declared that—

“... The most essential value- because the most concrete, is first and foremost the land: the land, which will bring them bread and above all, dignity...The rural migrants realise too late that even the barren land offers a better life in the rural community than the life they chose, so that, they realise at last, that change does not mean reform, that change does not mean improvement” (Fanon, 1963).

The excerpt (GR-OS-P23) depicts the helplessness of the agrarian rural members, in the face of water scarcity. In feeling denied of their natural rights to potable water, it may be difficult asking them to pay tax (George, 2006) or water rates for inaccessible water supply.

Findings indicate that water, being the touchstone of health care, may be facilitated by individuals, but, it is a major challenge accessing it. A participant said:

“We manage the health care facilities in the Ministry of Health. Basically, one of the major challenges has been access to potable water supply. So, we have been looking at ways of
ensuring that the facilities have water supply... for laundry purposes, to constitute drugs, to use for sanitation and hospital management processes” (MH-OS-P31).

The scenario presents scarcity of potable water as having far reaching consequences for the health sector. Lack of water supply may result in falling health standards, exposure to water borne diseases, such as cholera, diarrhoea, guinea worm infestation, typhoid and other similar diseases (Okorodudu-Fubara, 1998). This is capable of escalating mortality rate (Bigas, 2012).

From the findings, individuals are also involved in pharmaceutical productions, by using potable water supply. A participant said:

“Potable water supply is emm... one of those ingredients used in making extemporaneous preparation of drugs” (MH-WS-P14).

Non-availability of water could portend danger for the health sector, when production of pharmaceutical drugs and other health related demands become difficult to execute.

From the findings, individuals, who are school teachers, ensure that potable water is accessible to students and themselves, to avoid health challenges. One of the participants said:

“Well... because I teach, I see that students need water to drink. Most times, you are dehydrated when you teach, so you need water to drink. You need cool potable clean water to drink and the students also need good potable water to drink, so that, they won’t catch any infection or virus” (GR-UVP40).

The general notion about teachers is that they are employed principally, to impact academic knowledge, but, the duty owed to students encompasses the mundane and the sublime, in which students emerge from the academic crucible as emancipated to face the challenges in a constantly changing world. Thus, teachers stand ‘in loco parentis’ for their students. They owe a duty of care in ensuring that the students are safe from harm and ill-health, while within their
control. This is the legal requirement (Rogers, 2011), which may be regarded as an indication of good stewardship, enunciated by Jeremy Bentham (1832).

8.9 FORMATION OF RURAL ADVISORY BOARD FOR PARTICIPATORY WATER GOVERNANCE

Participants’ perception was that, the RAB may be best formed by ‘election’ (Appendix 9.8). Findings show that, knowledge of the character of community members aspiring to the RAB is critical to being elected for a position. Decision-makers may thus, nominate only those who enjoy their confidence. A participant commented that they should:

“Elect the people who they have confidence in” (CSO-OS-P28).

Trust is of essence in selecting the RAB members. This is due to the linkage between the act of election and the considerations given to the issue of public trust. Generally, the doctrine of Public Trust has progressively made incursion into the consciousness of people, that natural resources (like water), meant for the use and enjoyment of the public, should be preserved for perpetuity. However, decades of mis-management of water resources may have eroded the doctrine’s relevance and left users overwhelmed by inaccessibility. The Public Trust Doctrine was invoked in Nigeria for the protection of public lands evidenced in the LUA\textsuperscript{195} enactment (Chapter 3.2.4). However, rural communities also owe a duty to preserve their water supply for themselves and the incoming generations (Brundtland Commission, 1987). A careful selection of trustworthy persons to occupy positions in the RAB is, therefore, a matter for deep reflection. The key issues to consider should be, the candidates’ integrity on matters, which show accountability and commitment to sustainable potable water. These qualities are likely to stimulate the RAB to practice TAP, direct and lead rural community members to support the

\textsuperscript{195} 1978
RAB in practicing TAP principles, which includes collaboration and participation. The principles may enable the practicality of the provision of the Constitution of the Federal Republic of Nigeria 1999\(^{196}\), on the duty of environmental protection, imposed on the government.

Findings also indicate that participants are sensitive to the import of democracy, which is consistent with the inherent politics of water supply. A participant remarked that:

“Well, if you talk of how to select the Rural Advisory Board, it is supposed to be democratic because, the people know each other. So, they know the people they are going to select” (GR-OS-P22).

Politics is reflected in the way water may be managed under the governance system (Kaika and Page, 2003), due to rural community members’ choice, arising from their involvement in such choice. Democratic selection of RAB members may involve choice based on majority voting scores. Even if there was lobbying for best candidates, the vote cast should not be because of coercion or threat. It should be based on candidates’ merit and the conviction of the voter. Democracy is intertwined with participation, in which there is independence of opinion and decision-taking. It is therefore, anathemical foisting wrong candidates on the rural community members. One of the participants commented in this regard that:

“They themselves will pick the form for voting, pick their choice- nobody will impose anybody on any person” (BO-WS-P10).

Selection of wrong persons into the RAB may have far-fetched implications for the RAB and the entire rural community. It may mean governance failure in the mechanism for accountability—which may portend irregular water supply; unsustainability of initiator, donors and state actors’

\(^{196}\) Section 17 (g)
input; diminished rural community members’ confidence in the PWG, so that the PWG may become a failed project.

8.10 RURAL ADVISORY BOARD ROLES IN PARTICIPATORY WATER GOVERNANCE

From the analysis, the role of the RAB is multifarious, ranging from the mundane to the sublime (Appendix 9.9). However, the highest frequently used word is ‘information’, while the phrase most frequently used is, ‘division of labour’. Both words lack synonymy but, there is a kind of affinity, enabling the reader to understand their relevance to the concept of participation being canvassed in the study. From the findings, the onus of responsibility lies on the RAB to communicate information to the community members, so that they are given a sense of belonging. A participant remarked that:

“They bear responsibility to communicate such information to their people and enlighten them- so that the entire community is carried along” (CSO-OS-P28)

Information is the communication or reception of knowledge or intelligence (Merriam-Webster Dictionary, 2015). It therefore connotes the updating of the rural community members on the water governance. One of the participants said:

“By giving them updates of the water project in the area” (CCJ-UV-P51).

This consists of the feedback approach. A participant said:

“There must be a feedback approach” (GR-UV-P40)

The feedback approach is a source of information for the development of water projects, which the RAB may require for improvements (London et al., 1990). It also implies that the RAB should
make available, records of previous performance and infrastructure. Two of the participants said:

“Give them the records of what they have done before” (GR-OS-P25).

“If there are some changes that should be made in terms of equipment, they should also report” (HC-OS-P19).

Knowledge about the previous infrastructure may enable rural community members to identify why the equipment was changed and the modality put in place for running it. This may also enable a comparison with the PWG under scrutiny, which creates the necessity for regular information on the RAB activities. This may be traced to existing access to information in Nigeria, as a constitutionally endorsed right, regarded as Human Rights (Danner, 2012), provided for in the Constitution of the Federal Republic of Nigeria 1999.197

Access to information in Nigeria has progressed beyond the fetters of the provision of Official Secrets Act of 1962 and the Criminal Code Act within which numerous press and speech offences were enacted, but ameliorated by the Freedom of Information Act.198 Information as a tool, should be accessed by all for development to take place.199 Thus, information dissemination should show that the infrastructure has been put in place and functioning efficiently, according to minimum standards; That a budget has been planned for, which may be realised from collected water tariff (the budget may be used for evaluating RAB performance); That there is a process of familiarisation with the RAB financial affairs and there is a process of evaluating

197 Chapter 11, Fundamental Objectives and Directive Principles of State Policy (Amended), Section 14 (3) and (4)
198 2011
199 Freedom of Information Act (2011) is the culmination of a prolonged battle for access to public information, which had previously been restricted
financial statements; That there is a reasonable opinion of the RAB financial capacity; That the RAB members exhibit administrative sagacity, which should enable sustainability in the potable water governance. These are critical contextualised matters, led by synonymous issues, highlighted by Court, in the case of Chartered Secretaries Australia Ltd v Attorney-General of New South Wales200.

Findings point to the relevance of assigning specific duties to each RAB member. A participant said:

“Each member should be allotted his own responsibility” (HC-UV-P37).

This view emerged because, it may not be feasible for the RAB Chairman to singularly, perform all the tasks in ensuring sustainability of potable water. There should be delegation of roles or responsibilities. Delegation of powers is the transfer of authority by one person to another or one group to another (Encyclopedia Britannica, 2016). An organogram of the RAB implies the sub-division and sub-allocation of powers, to achieve effective results. However, in the case of Asic v Rich201 (preceded by Awa Ltd v Daniels, trading as Deloitte Haskins and Sells)202, court held that, delegation of powers does not connote abdication of responsibilities by the delegator of responsibility. A major role of the RAB (in which participation is reflected), is the delegation of authority among the members and the CTF. This is similar to the delegation of responsibilities identified in contemporary corporate practice, in which, non-executive directors of big companies manage the affairs of the corporate organisation on daily basis. Courts recognise that in the constitution of a corporate organisation, company business should be managed by directors. However, practically, in large companies, there is delegation of management to executive officers, while the directors’ oversight duties remain (Encyclopedia Britannica, 2016).

200 [2011] NSWSC, 1274
201 [2003] 44 ACSR 341
202 [1992] 7 ACSR 759
In setting out RAB duties, it is necessary that decision-makers of the PWG framework should be able to clarify and put in place the instruments identifying the role and responsibility of the RAB members, who should in turn do same for the CTF (Chapter 5.14.7). In view of this, the relevant issue is not whether the RAB members have personally managed the governance structure, but whether, their conduct as RAB members, satisfy the minimum standards of diligence and whether, governance roles have been appropriately delegated to the members and to the CTF.

In the performance of various roles, the assurance that the minimum standards of diligence are in existence and working to the satisfaction of stakeholders may give fillip to the governance structure. This may lead to clarity that, minimum standards of diligence in governance are reflected in the familiarity of the RAB, with the fundamentals of the board and the mode of operation. For example, in ensuring that there is constant flow of water for the users. Thus, the assignment of specific duties implies the rendering of services to the rural community members.

One of the participants said:

“I am in charge of the water scheme that has been established in the community. I make sure that it functions well, it is serving the people, it is maintained and it is run constantly” (HC-OS-P19).

This is indicative of the act of stewardship (Palmers, 2006). Findings also indicate that specific duties involve technically informed expertise, resulting from educational background and work experience. A participant said:

“Different roles- and then, that’s where the issue of technical expertise comes in, based on their educational or work experience” (CSO-WS-P11).

Technically, water supply involves expert laying of pipes, ensuring that the facility is well maintained, knowing when the water may be compromised for quality and other unforeseen technicalities (UNDP/IFAD, 2015). These may require prompt local experts or state ministries’ attention. The excerpts imply that, division of labour provides assurance that the RAB members
are likely to ensure rural community access to potable water, maintenance and security of the infrastructure. One of the participants encapsulates what the RAB is expected to do thus:

“The members need to assist in making sure that communities have access to water, that the various water facilities are working, that wherever there is any problem, it is fixed on time, that water facilities that are in place are well protected- by way of securing them and also, they have to be transparent in whatever they are doing. They have to be accountable to the people and get some people that are capable of doing the work to participate, to make sure that this job is fixed” (HC-UV-P38).

Furthermore, the RAB should transparently ensure that the community members, considered capable are not deprived from participating in the governance for potable water supply. Thus, the use of TAP in the governance may have an over-arching effect on all the duties or roles.

Findings show that, there should be a prescribed organogram of the RAB members’ positions. For example, such positions as Chairman, Secretary, Financial Secretary, Technical Adviser and other members, who are the Chairmen of their rural community quarters. These may be selected into the CTF, which may ensure enforcement and compliance to the RAB rules. One of the participants said:

“They should have like any other organisation, the typical structure of whoever is head, secretary, treasurer, financial secretary. You know the usual organisational personnel that is what I would expect” (MH-UV-P48).

The findings indicate that, the RAB may act in the capacity of public trustee for the protection of the potable water scheme. A participant said:

“...Tell the people about the need to be supportive, not to destroy water facilities, to ensure that everyone is interested in protecting the water schemes meant for the entire community” (CCJ-WS-P17).

In corroboration of the perception, another participant said:

“Educate the people and educate the community on the importance of the water project” (GR-UV-P40).
Participatory water governance framework inquiry: analysis of findings

From the findings, it is pertinent that different committees serving various purposes may be formed by the RAB. A participant commented that:

“In the board, there can be different committees with different assignments, depending on the scope of what is required. You can have committees on security, welfare, revenue drive and other committees” (MH-WS-P14).

There are different types of committees—such as the *ad hoc*, select, statutory and the standing committees. While the *ad hoc* committee is created to proffer solutions to non-generalizable issues (unadaptable for other purposes), the select committee is appointed to inquire into or to consider a particular matter or bill (Merriam-Webster Dictionary, 2015), (which can be adapted for the governance rules). The statutory committee is enacted, created or regulated by statute, while the standing committee deals with designated subjects (The Free Dictionary, 2015). The CTF set up by the RAB is within this latter category. It is akin to an organisational committee set-up, in which a large size may not permit everyone to be involved in decisions affecting the whole organisation at a time (McLeod, 2008).

The CTFs, set up by the RAB for coordinating roles, should meet regularly to discuss development in their areas, review reports and talk of future options. However, the CTF functions extend beyond this. This arises from their specific vested powers by the RAB, to enforce rules and ensure that rural community members, who are users of potable water, comply with the rules. It may therefore, be challenging to the RAB to successfully manage the CTF to effectively discharge their onerous duties.
8.11 PARTICIPATORY WATER GOVERNANCE: EFFECTIVE MANAGEMENT OF RURAL ADVISORY BOARD

The perception was that, the effective management of the RAB may best be realized through ‘Transparency, Accountability and Participation (TAP)’ (Appendix 9.10). Findings indicate that TAP principles, may be explored by the RAB to enable effectiveness. One of the participants remarked that:

“The best thing the Rural Board can do is to stick and adhere to those three basic objectives. We have transparency, accountability and participation. That may definitely encourage donors to do more and even stretch the scheme to other neighbouring communities, who may be suffering the same fate” (BO-OS-P27).

TAP principles may serve multiple purposes. For example, they can be used to sustain donor agencies’ input. TAP may encourage initiator’s continuous assistance, beneficial for the rural community members. A reflection of the benefit of using the principles is the likely influence on adoption of the PWG framework by neighboring communities.

From the findings, the RAB should practice transparency, in which there is openness in transactions. One of the participants commented about the RAB that:

“They have to be honest and transparent” (HC-OS-P20).

In PWG, RAB members should be able to exhibit integrity, so that, stakeholders’ confidence and support are sustained. Additionally, a major advantage of exploring the principle of TAP is the encouragement of team spirit. One of the participants said:

“Working as a team with them- that may create success” (HC-UV-P37).

This implies cooperation among the members, so that failures and successes are collectively evaluated. While team spirit ensures the sharing of ideas, it also involves ability to accept defeat gracefully, when suggested ideas or opinion fail to meet majority approval.
Arising from further findings, TAP may ensure accountability in the collection, remittance and expenditure of water rates. One of the participants said:

“Every collection is accounted for, all expenditure is well explained” (HC-UV-P38).

Distrust may result from non-disclosure and failure to render good account of financial activities. Rural community members may be unwilling to pay water rates, while support may be withdrawn for that regime.

Findings show that there should be a synergic relationship between the RAB and the rural community members, when the RAB members are rural-community-based. A participant said:

“When we use these people that are community based, you will find out that, there will be synergy between all the structures” (GR-UV-P42).

This is because, community members understand the psychology of their members, they also possess local knowledge and are capable of comprehending traditional enforcement and compliance mechanisms more than community members from diaspora. It is also not enough that potable water supply has been initiated, if the mechanism for sustainability is not instituted. Thus, when rural community members are involved and participate in water governance, the RAB may be able to ensure the sustainability of potable water supply. One of the participants said:

“Definitely, you have to carry people along. If you want any project to be sustainable, the stakeholders have to be carried along” (MH-WS-P14).

One of the ways of carrying people along may be through the provision of information dissemination, which should enable the participation of rural members. A participant said:

“Providing enough information to enable consumers to have full participation” (MWR-UV-P50).
Information flow may remove distrust, enable the engagement of rural members in sharing local knowledge, necessary for PWG administration.

### 8.12 EVALUATION OF THE RURAL ADVISORY BOARD

Analysis depicts several indicators of evaluation of the RAB. However, ‘information’ was the most frequently used term (Appendix 9.11). Findings indicate that evaluation may enable correct information. A participant said evaluation is intended:

“To give proper information” (ME-UV-P49)

Information may enable effective feedback to RAB and government, on RAB performance, while evaluation may facilitate the knowledge of gaps, which would require a reappraisal or review of the water governance. A participant said:

“The report from evaluation would definitely be made available to the Rural Advisory Board and to the government. They may be able to know whether, they are making any impact and whether, the scheme has succeeded” (AC-WS-P12).

Finding shows that by identifying lapses in the governance, evaluation may enable the discovery of issues, which need special and speedy attention. A participant commented, thus:

“…Identify lapses in the system, identify where we have issues, where we have short falls and curtail them immediately” (CO-WS-P1).

Based on findings, RAB evaluation may enable creation of informative, documentary reports on the activities of the monitoring and evaluating team. One of the participants said:

“The report should be a kind of documentation to give insight of what the evaluation and monitoring have been able to bring” (CSO-UV-P28).
The initiator of PWG has an interest in the administration, which may be justified, when there is provision for important information. It may enable the initiator to know, whether there is sustained good performance and infrastructure utility. This can only be done through evaluation. A participant commented thus:

“To know whether what you gave to us is actually working, to know whether we are using it the way we are supposed to use it” (GR-UV-P42).

When a project is evaluated and users are informed of the outcome, a feeling of satisfaction is created, that they are not excluded from information. One of the participants said:

“Evaluation is in fact, the most important thing because, when people are satisfied, you should get the feedback” (HC-UV-P36).

Findings indicate further that, it is important for the RAB to know whether they are performing creditably or whether, their performance is diminishing. Evaluation of the system should provide that information. A participant remarked that:

“There should be an evaluation mechanism to know if the Rural Advisory Board is doing the right thing” (HC-UV-P38).

The perception was corroborated, thus:

“With evaluation of what you put in place, you would know whether... there’s a diminishing return or it’s functioning well or if there are problems” (HC-WS-P2).

From findings, information of RAB evaluation may enable non-state actors’ continued interest in the PWG. A participant said:

“The interest of the consumers may need to be sustained with such information” (MH-UV-P48).
In evaluating the performance of the RAB, there is the possibility that, further assistance may be rendered by the state actors and the initiator of project. This could be by coordinating workshops and seminars on effective means of infrastructure sustainability; Organising workshops on why it is considered more profitable to pay water tariffs; Organising workshops, discussion seminars and rallies on why the treated water promotes better health, instead of the polluted water earlier relied on by the rural community.

8.13 GOOD WATER GOVERNANCE: TRANSPARENCY IN PARTICIPATORY WATER GOVERNANCE

From the analysis of results, ‘information’ is identified as the best interpretation that may be ascribed to transparency in the RAB performance (Appendix 9.12). Findings indicate that, information may enable the provision of correct feedback. A participant remarked that the RAB should:

“...Give proper feedback” (GR-UV-P39).

This may provide records of activities carried out previously. Another participant said:

“Give them the records of what they have done before” (GR-OS-P25).

In a way, it reflects an evaluation of the RAB on itself. This is because, it may enable the board to correct past errors, improve the governance for the future and gain the confidence of the rural community members. Notably, the provision of information is a major key to effective water governance, in which there is consultation with stakeholders and the general public (Louka, 2008). Findings provide that, information may enable sensitization of community members, on decisions affecting them in the supply of potable water. One participant commented that:
“Sensitization- creating awareness that the people at the community level need to be part of the decisions that affect their day to day living” (CSO-OS-P28).

Such information may be on payment methods for water consumed; Reports on payment and non-payment of water tariff; Some government pronouncements or decisions; A host of other information, capable of endearing the RAB to the community members for efficiency and accountability. One of the participants commented thus:

“A transparent accounting system, such that you see where money went and what has come out of it” (CO-WS-P1).

Notably, information could supply correct accounting system of the expenditure of money collected, spent and the available balance.

8.14 GOOD WATER GOVERNANCE: ACCOUNTABILITY IN PARTICIPATORY WATER GOVERNANCE

From the results (Appendix 9.13), ‘Regular supply of water’ is the highest frequency showing accountability in the RAB performance. Findings indicate participants perceive that, ‘accountability’ may be generally judged by whether there is a sustainable supply of potable water. One of the participants commented, thus:

“Their first major test of accountability is an uninterrupted water supply” (MH-UV-P48).

The perception was corroborated by another participant thus:

“If the project is carried out successfully and the people are enjoying the water” (HC-WS-P3).

It may be of paramount importance, if the RAB enables the rural community members to enjoy the supply and use of potable water. Accountability may be identified as the judicious and
accountable use of generated funds, enabling sustainability. This may ensure the enjoyment of regular water supply by the rural community members. A participant said:

“The measure of success may depend on how regular the scheme is working and, whether funds that were generated are properly accounted for and used judiciously for the continued success of the scheme (HC-OS-P19).

Findings further show that accountability is, when the facility is well maintained, secured and there is regular water supply. One of the participants said:

Well, when facilities are provided, they are maintained, they are not destroyed and we have regular supply of water. I think we should be able to say that they have succeeded (CCJ-WS-P17).

Accountability may, therefore, nurture the trust progressively reposed in the RAB by the community members.

8.15 GOOD WATER GOVERNANCE: PARTICIPATION IN WATER GOVERNANCE

Analysis shows that participation is perceived principally, as ‘community involvement’ (Appendix 9.14). Findings show that it is necessary to involve other stakeholders, who are the end users from the rural community, in the water governance, to enable reduction of water supply challenges to the barest minimum. A participant said:

“If we can have community participatory frame work, then, the problem of water supply would have been reduced to the barest minimum” (HC-OS-P19).

Community participation and collaboration with government in decision-making, planning, implementation and evaluation are indicators of good water governance.
8.16 EFFECT OF COMMUNITY TASK FORCES IN PARTICIPATORY WATER GOVERNANCE

In the analysis, ‘enforcement’ was perceived as the highest effect of the CTF (Appendix 9.15). Findings show that CTFs may be set up to ensure that RAB planned actions are brought to fruition. A participant commented on this:

“To effect the proposed or planned actions of the planned activities” (HC-UV-P37).

The selection of CTFs as standing committees may be identified as tool for actualizing RAB agenda for sustainable water supply. Specifically, the CTF may be able to ensure that the overall RAB rules in the PWG would be observed by rural community members. These include payment of water rates and maintenance of infrastructure. One of the participants said:

“Enforcement- both in terms of people paying their tariffs and people taking good care of the facilities” (IMH-OS-P31).

There are other roles that the CTFs may play- such as securing the infrastructure, purchasing of fuel for the generator and ensuring that water is regularly supplied to the rural community. Findings indicate that specifically, CTFs may be effective in enforcing discipline. A participant commented that:

“Enforcing emm... discipline among the community users of the water scheme” (HC-OS-P19).

This perception implies that within a plain interpretation, the CTFs may ensure that rules are complied with. However, ‘discipline’ may entail a complex interpretation. Merriam-Webster (2015) defines the word variously as control gained by ensuring that rules or orders are obeyed and the punishing of bad behaviour; A way of behaving, indicating a willingness to obey rules or orders. It may also be connoted as a behaviour that is judged by how well it follows a set of rules or orders. From the variety of definitions by the author, discipline may connote punishment,
control gained by enforcing orders, orderly or prescribed conduct or pattern of behaviour, self-control or a rule or system of rules governing conduct or activity. Discipline may, therefore, be identified as a word bearing weighty implications. For example, in the first instance, there must be a set of existing rules. This is because, non-adherence to a particular rule may not be judged by retrospective rule or law (Francis Bennion’s Statutory Interpretation, 1990), which is generally regarded as unjust law. Secondly, instances of breach should be expressly stated. Thirdly, punitive measures to be explored should be expressly and not impliedly nor spuriously stated. Where any of these conditions are not met, a community member, subject to the CTF disciplinary machinery may allege a breach of constitutionality in which the abuse of power was exercised but provided for by the Constitution of the Federal Republic of Nigeria 1999. The CTFs may depend on using such traditional method as ostracism for rules compliance and enforcement. However, if the fundamental rights of the rural members are breached in the course of enforcement, the Court may adjudicate over such infringements. This may be when, the matter could not be amicably resolved within the community.

8.17 MECHANISM FOR ACCOUNTABILITY: COLLECTION OF WATER RATES IN PARTICIPATORY WATER GOVERNANCE

From the analysis, the highest frequently used phrase is ‘selected rural people’ (Appendix 9.16). The theme indicates the responsibility given to certain persons for the collection of water tariffs. Findings indicate that ‘selected rural people’ are preferred for the task and that, the collection of water rates may not be for everybody. A participant said:

“It must be vested in people that have been mandated” (GR-WS-P7).

203 Chapter II, Fundamental Objectives and Directive Principles of State Policy, Section 15 (5)
Selection of persons may be based on the honest disposition of such people. It may thus, be necessary, to ascertain the antecedents of such persons’ character by seeking information from those enjoying proximal relationships with them. Findings also indicate that, only those selected from particular rural communities should be mandated to collect water rates. One of the participants said:

“Selected people from the rural area should be the ones that are collecting” (AC-WS-P12).

The familiarity and proximity in day to day existence amongst rural community members may give impetus to the collection of water rates and enable sanctions, where the community members breach the rules.

### 8.18 MECHANISM FOR ACCOUNTABILITY: REGULAR SUPPLY OF WATER IN PARTICIPATORY WATER GOVERNANCE

In the analysis, ‘The Community’ emerged as the highest frequently used phrase (Appendix 9.17). Findings indicate that, while the participants expressed the view that members of a rural community are capable of ensuring the regular flow of potable water, the experts among them may specifically, be vested with such responsibility. Two of the participants commented that:

“It should be people who have retired from emm... working with the water board- retired civil servants, who had worked with the water board” (HC-UV-P36).

“...To ensure regular supply- you must have experts” (CCJ-OS-P34).

There is relevance in considering expertise in the selection or appointment of community members into such specialised area as the ‘regular supply of water’. The consideration of inherent technicalities in sustainability of potable water is the issue. A plausible suggestion is that, community members with past experience in water supply may function as experts. Examples of these are the retired civil servants from the Water Boards or Ministry of Water
Resources. Experts are persons with proficiency in their field, showing special skills because of what they had been taught or experienced (Merriam-Webster Dictionary, 2015b). Since they are adroit in the business of water, they may easily understand the dynamics involved in the regularity of supply.

8.19 MECHANISM FOR ACCOUNTABILITY: SECURITY OF INFRASTRUCTURE

From the analysis, ‘Rural Members’ had the highest frequency for those who can secure the infrastructure (Appendix 9.18). From the findings, those who use water supply in the rural communities are the community-based members. Therefore, they are adjudged to be most suitable for securing the infrastructure for potable water supply. A participant said:

“The end users who are the community based people” (GR-UV-P41).

It may be arduous for a non-community member to secure the water infrastructure. The argument is hinged on the proximal interactions of community members. There is common knowledge of each member’s character, while the honest and dishonest ones are easily identified by their cohorts, neighbours and family members.

Another finding is that, the category of persons that may be most suitable for security may be the youths. A participant said:

“Youths would appear to be better, because, they would have the strength to be alert” (CCI-OS-P34).

This perception arose in deference to youthful energy and zest, which may be usefully channelled into ensuring that the infrastructure is not vandalised. In this regard, the community member in charge of the CTF for security may be selected from among the community youths also. One of the participants commented that:
“Well, this advisory committee may still have taskforce. They may have to set up taskforce, which may be in charge. From this taskforce, they may have some youths. They may entrust these things into their hands. They should make sure that things are not vandalized” (GR-OS-P22).”

Nigerian youths may be deemed as ambitious, energetic and confident of their capacity as agents of change and innovation. Their self-confidence may be enhanced by involvement in matters affecting them directly and within public domain (Zeldin, 2004). Generally, youths develop better decision-making attributes when encouraged to exercise their rights (Zeldin, 2004). Contributing to a cause, such as securing the water infrastructure, may be regarded as critical to their sense of self-worth and responsibility in the locality. Recognition may thus, be ascribed to the inherent quality of youths, through empowerment, by vesting them with sensitive responsibilities. This assertion is reflected in the following reflective statement:

“The world demands the qualities of youth: not a time of life, but a state of mind, a temper of the will, a quality of imagination, a predominance of courage over timidity, of the appetite for adventure over the life of ease” (Kennedy, 1966).

Findings indicate that another category of rural members, who may have capacity to secure the infrastructure are those who, by their past experiences, dealt with security related issues. One of the participants said:

“People, who have worked in the Security Forces before- retired police officers or police men. Then, the vigilante groups” (HC-UV-P36)

This category may include persons who worked in the police, military or para-military force or persons with previous employment in private security organisations or Banks. A further finding from the excerpt is that, rural community members may be selected as vigilante workers. These persons are members of volunteer committees for the suppression and summary punishment
of crime and described as doers of self-appointed justice (Johnston, 1996). Vigilante members are not members of law enforcement, but persons who pursue and punish persons suspected of breaking laws. Vigilantism as a term may connote any non-state form of policing, which is generally regarded suspiciously, because, they seem to take laws into their own hands (Pratten, 2008).

In Nigeria, vigilantism dates back to pre-colonial era, when some communities established their own army in the South-East, to defend their territory against invasion from neighbouring communities (Human Rights Watch, 2002). From 1998, the steady rise of criminal activities, exacerbated by corruption in the police force and inefficiency in state security services, led to ‘Bakassi Boys’ formation. It was a vigilante group in the South East of Nigeria and notably, from Aba and Onitsha (Human Rights Watch, 2002). It was easy to recruit young men into the group, due to unemployment, lack of confidence and trust in state institutions. The poor relationship between communities and the police, may have also heightened the extent to which, local boys found their way into the enclave. The group comprised of persons from different communities and enjoyed support from state governments, who provided them with offices, vehicles, uniforms and salaries. The Anambra State Government provided legal backing for them under the Anambra State Vigilante Services Law\textsuperscript{204}, published in the Anambra State Official Gazette, Awka\textsuperscript{205}. The group later became unaccountable for their activities and uncontrollable by governmental security apparatus (Human Rights Watch, 2002).

\textsuperscript{204} No. 9 of 2000
\textsuperscript{205} August 4, 2000.
Delta State of Nigeria is a neighbouring state to Anambra State and the gradual influence of the Bakassi Boys’ vigilante group was discernible. This is because of the growing violence among the youths, who belonged to various cults under the guise of vigilantism. However, the Delta State Government reacted by proscribing several emergent cult and ‘vigilante’ groups. The Prohibition and Proscription of the Youth Association and Organisation Law 2001 provides that, the Attorney-General may, from time to time, with the Governor’s approval, make an order exempting any group or organisation, whose activities in the opinion of the governor, are for the advancement of public safety, order or public good of the state.

There have been debates on the efficacy of vigilantism, which may be justified in considering the failure of government to enforce laws (Johnston, 1996). Gramsci (1971) argued that, a weak state structure is like a flagging army, in which the commandos (the private armed organisations) enter the field with two tasks- to make use of illegal means, while the state appears to remain within legality and, thus, to recognise the state itself. Vigilantism carries with it a burden of blame, in which it is regarded as the supplanting of guilt by the state, which may blame the people for taking laws into their hands and by the people- who may equally, blame their own actions on state inaction (Nandini, 2014). The blame-shifting places vigilantism in the bystander’s mind, as an extra-judicial means of ridding society, of an inconvenience (Nandin, 2014) or a phenomenon of nuisance value. Thus, Nigerian communities prefer security to justice, so that loud ovation greets the sacrifice of justice on the altar of security. Galeano (2000), in reaction, argued that, any time a criminal falls in “a hail of bullets”,

\[206\] Section 4
society feels some relief from the disease that makes it tremble. The death of each life has a “pharmaceutical” effect in those living a high life (Galeano, 2000).

The foundation of the Nigeria legal system rests on the Rule of Law, in which people are expected to behave, guided by legal provisions and not their preferences. In reference to this, support for a vigilante group should depend on the essence of setting up the group to address a problem. Presently, although the vigilante members in Nigeria (notably in Delta State) enjoy government support, by being used for crime reduction, they are pre-empted by the Prohibition and Proscription of the Youth Association and Organisation Law from inflicting injuries or any other form of sanction against an offender. They must hand an offender over to appropriate authorities for necessary sanctions. This may be the crux of setting up a vigilante group to secure the PWG infrastructure, for the supply of potable water in the rural community.

8.20 MECHANISM FOR ACCOUNTABILITY: MAINTENANCE OF INFRASTRUCTURE

Analysis indicates that ‘experts’ was the most frequently used word (Appendix 9.19). Findings show that ‘experts’ have capacity for technicalities, to maintain the infrastructure. A participant commented that:

“The technicians are needed to help maintain the infrastructures” (GR-UV-P40)

The perception was corroborated by another participant thus:

“Maintenance of the infrastructure- that’s the work of the technicians” (GR-OS-P22).

207 2001
Technicians are experts having special skill or knowledge in some particular field, representing mastery of the subject (Merriam-Webster, 2015b). Expertise could be a vested term, as a result of practical experience garnered in the course of handling similar responsibilities in the past. It may also be as a result of formal education, acquired while in a learning institution—such as a university or technical college. Expertise may also be acquired informally by apprenticeship. The infrastructure for water supply may, therefore, not be handled by those who are non-experts of such a facility. While the rural community expert may not necessarily possess a formal learning, it may be sufficient to be an expert based on experience. However, depending on the sophistication of the infrastructure, when complex issues of maintenance arise, the services of a formally trained expert may be required. A participant commented, thus:

“If the scheme is so sophisticated, that will require experts like engineers” (AC-WS-P12).

The implication is that, they may not require expert technical maintenance services for uncomplicated infrastructure, so that, any local expert attention should suffice.

### 8.21 MECHANISM FOR ACCOUNTABILITY: MONITORING OF PARTICIPATORY WATER GOVERNANCE

Analysis shows that, ‘community members’ are considered most suitable for the task of monitoring, although there are other possibilities (Appendix 9.20). Findings indicate that community members, who are most suitable for monitoring are the youths and men in the rural community. One of the participants said:

“The youths and men” (HC-WS-P4)

Contextually, ‘monitoring’ is the watching, observing, listening to or checking something (Merriam-Webster Dictionary, 2015), which may be the PWG. The PWG consists of an
organogram, in which the RAB members may constantly execute responsibilities to yield potable water sustainability. Monitoring of the different segments may therefore, ensure good performance. Monitoring may, thus, identify the strength, expose areas of weakness, such as constraints encountered by the RAB, the workers and the generality of users. Monitoring may also, identify inadequacies in water supply- such as faulty taps, laying of water pipes and non-payment of water rates (UNDP/IFAD, 2015).

Findings show that rural community heads may monitor the governance of potable water. One of the participants said:

“The traditional Chiefs of that community” (HC-UV-P37)

Chiefs are community leaders and may be persons committed to the community’s best interest. The diligence in attending to this function, may be borne out of commitment to community good (Miles, 1993). Findings also indicate that, resident retired civil servants, in the rural community, have capacity to monitor the governance structure. This category of persons may use their wealth of experience to give viable suggestions, where necessary. A participant opined that a group most suitable are:

“Retired auditors from the civil service, from the federal auditor-general’s office or even, in local government Auditor-General’s office” (HC-UV-P36).

Another finding is that a government institution can set up a monitoring team in the rural community. One of the participants said:

“The institution can set up a monitoring team” (HC-OS-P21).

The Rural Water and Sanitation Agency (RUWASA) is a governmental institution, representing the state government at the rural communities. They are independent of the RAB and the
workers may monitor, to ensure an effectively organised governance. The implication in mentioning various categories of persons for monitoring indicates that, there are certain persons whose involvement in monitoring may not be required, such as the aged, those with serious physical disabilities and non-adults.

### 8.22 MECHANISM FOR ACCOUNTABILITY: PAYMENT OF SALARIES

Analysis of the theme showed that the most prevalent perception is ‘Rural Community’ (Appendix 9.21). Two interpretations may be adduced from the theme-

1. **Who should be responsible for paying workers’ salaries?** From the findings, it is construed that, since the PWG under inquiry is expected to serve the community, the onus of who pays the salaries of workers lies with the end-users in the particular community, where the infrastructure is ‘in situ’. A participant commented, thus:

   “The community where this water scheme is in place” (HC-WS-P2)

   It is intended that if this is adopted, a more convenient, neater and compact arrangement would be in place. Another participant corroborated the view thus:

   “The end users” (GR-UV-P41)

2. **The category of persons that should be responsible for paying workers’ salaries.**

The second interpretation is, the category of rural community members that may be most suitable for bearing the task of paying the salaries of workers. One of the participants said:

   “The end users” (GR-UV-P41)

This latter perception has been represented to show the dichotomy or sameness in response. The question does not contain any ambiguity and was given a plain interpretation. The
interpretations of the findings are, therefore, that the community members, being the ones mostly involved in the water governance, should be responsible for paying the workers, but it would serve a better purpose, if those given the responsibility, have an accounting knowledge as local experts. One of the participants commented thus:

“At the rural setting, they may have somebody that has knowledge about accountability or accountancy (BO-WS-P10).

This latter perception stems from the understanding that water, being a most complicated economic goods, deserves expert attention. It may be easy to derail the objectives of the PWG, when controversial pecuniary issues are allowed to over-ride the expectations for accountability, capable of sustaining the input and trust of the initiator, decision-makers and community members.

8.23 VARIETIES OF COMMUNITY SANCTIONS IN PARTICIPATORY WATER GOVERNANCE

From the analysis, ‘ostracism’ was the most frequently used word (Appendix 9.22). To ostracize a person is to exclude a person from a group by common consent (Merriam-Webster, 2015). Based on findings, ostracism connotes the excommunication of an offender from every activity involving other water users, for offences related to the PWG. A participant said:

“Forbidding them in joining in every activities of the village” (GR-OS-P23).

Specifically, there are ways of ostracizing an offender- such as excommunication from community festivals or market- the offender becomes ‘persona non grata’ in the market place. They also can neither sell nor buy goods from anyone. A participant commented thus:

“They can give you a public sanction like the village festival-they don’t want to see you and your family there. Like the market day- you cannot come to the market to buy food or anything and, if you’re a fisherman or your dad is a fisherman, they can tell the
community, that nobody should go to that man’s family to buy fish or to sell anything to them” (ME-UV-P49).

The latter part of the excerpt may be referred to as trade ostracism. One of the participants contributed thus:

“If that person is selling something- they may tell everybody that- nobody should buy anything from that person” (GR-OS-P24).

Another way of ostracising an offender is by excommunication from the community, referred to as banishment. One of the participants commented about the word:

“Banishment” (GR-WS-P6).

Banishment as a sanction is reminiscent of the punitive measures against Okonkwo, who killed the boy- Ikemefuna, who called him ‘father’ (Achebe, 1958). Further findings show that, ostracism may also be explored as a sanction method in voice ostracism, when an offender is ignored by other community members, who may neither speak nor encourage the offender to speak to them. A participant said:

“They may be ignored by other community members” (CCJ-OS-P34).

While trade, voice and excommunication from community activities may succeed under the Customary Laws (since they are the traditional ethos of the people), it is doubtful whether banishment is legally acceptable. This assertion takes into consideration, Nigeria Court’s repugnancy test to check extremism in the application of local laws (Chapter 3.2.6). This may also be ascribed to modernity factor, obviating such social-cultural extremism, due to legal implications. Banishment has also become an obsolete and repugnant sanction method (Chapter 3.2.6), as a result of Fundamental Human Rights provision in the CFRN. In the
Constitution of the Federal Republic of Nigeria 1999\textsuperscript{208}, no Nigerian may be expelled from any part of the country or refused entry. The case of Alhaji Shugaba Darman v Federal Minister of Internal Affairs and others\textsuperscript{209} is a locus Classicus on this. The Respondent- a Nigerian, was arrested and deported from Nigeria on a deportation order, to Chad Republic. The allegation purported that he was domiciled there. Shugaba challenged this at the High Court, which gave judgment in his favour. The Federal Government challenged the High Court’s decision at the Court of Appeals and lost. On a further appeal, the Supreme Court ruled in Shugaba’s favour, awarding compensation. A further implication of banishing an errant community member, may be attributed to Nigeria Customary Law. While flexibility attaches an accepted usage in Nigeria, but, its flexibility exempts the acceptance of actions interpreted as repugnant. Thus, the Courts maintained in \textit{Edet v Essien}\textsuperscript{210} that a Customary Law may only be applied when it is not repugnant to natural justice, equity and good conscience. This provision of the Customary Law is also in the Evidence Act 2011\textsuperscript{211} and may be applied to the issue of the banishment of a person for violating the rules of the PWG.

\textbf{8.24 EFFECTS OF COMMUNITY SANCTIONS IN PARTICIPATORY WATER GOVERNANCE}

Analysis shows that ‘deterrence’ is the most frequently used word portraying the effects of community sanctions (Appendix 9.23). Deterrence is the act of making someone decide not to do something or preventing a particular act or behavior from happening (Merriam- Webster Dictionary, 2015). From the findings, community sanctions are intended as prevention for future occurrence of an offence. One of the participants commented that:

\begin{itemize}
\item \textbf{Participatory water governance framework inquiry: analysis of findings}
\end{itemize}

\textsuperscript{208} Section 41
\textsuperscript{209} [1982] 3 NCLR 915
\textsuperscript{210} [1932] 11 NLR 47
\textsuperscript{211} Section 18 (3)
“They help to prevent future occurrences” (MO-UV-P54)

There are other less frequently used words indicated in the analysis (Figure 8.1), but they all congregate under ‘deterrence’, which is referred to as a lesson to the other users. Another participant corroborated the perception thus:

“It’s like a lesson to others” (MWR-OS-P33).

![Diagram of community sanctions in participatory water governance]

**Figure 8.1: Effects of community sanctions in participatory water governance**

### 8.25 COMMUNITY SANCTIONS AND CULTURAL IMPLICATIONS IN PARTICIPATORY WATER GOVERNANCE

From the analysis, ‘Yes’ is the most frequently used word answering for the question on whether community sanctions have cultural implications (Appendix 9.24). Findings indicate that community sanction methods are tools, which have a long traditional history of acceptability and usage- provided, there is no repugnancy. One of the participants commented that:

“Yes, definitely- even, it is primordial, from generation to generation. It is cultural and it is instituted” (GR-UV-P42).
Participatory water governance framework inquiry: analysis of findings

Needed corroboration was provided by a participant, by way of analogy, based on antecedent derived from the story of Mary Slessor (Livingstone, 1927):

“I may give you an example, which may not follow the line. However, we know that, when the late Mary Slessor saved the lives of twins in Calabar, it was due to a cultural background proof that, ‘anyone that gives birth to twins will be put to death or one thing or the other will happen to them’. So, that means this thing has been there, even before this issue came up. As a background, that issue can be drawn from the whole thing. We also heard about it in Ibo land in Nigeria. They have the Arochukwu. These are the traditional things that have been there, even before the 20th or 21st century. So, they all draw their roots from traditional and cultural background” (AC-OS-P29).

A further corroborative perception was provided by another participant:

“Yes, because for any community members to adhere strictly to all the rules regulating this kind of a scheme... If you want to perhaps, impose any penalty on them, it must be reflected in the norms and culture of the people because, any culture that is not part of the people’s way of life, may never be obeyed” (AC-WS-P12).

Findings indicate that, potable water supply is closely knitted to the culture and tradition of the rural communities in Nigeria. One of the cultural linkages is the use of water for religious propitiation (Elias, 1956; Chamberlain, 2008). Although a body of water, such as a lake, may be regarded as community property, there are community rules guiding the access. For example, it may be a taboo to fish in a community lake on days designated as sacred or to fish in some designated lakes or streams. Deterring community sanctions may be imposed on persons breaching such rules. Thus, the traditional sanction methods are usually more dreaded than the legal processes imposed by enactments and administered by Courts (Kolajo, 2000).
8.26: LAWS AND POLICIES: PAYMENT OF WATER RATES IN PARTICIPATORY WATER GOVERNANCE

The analysis shows that, ‘pay water rates’ perception is dominant (Appendix 9.25). Findings indicate that, there should be payment of water rates for water consumption. One of the participants said:

"Consumers should pay for what they consume" (CCJ-UV-P51).

The perception arose because of the status of water as economic goods (Aarhus Conventions, 1998). Payment for water services may generate needed revenue, enabling payment of salaries, maintenance, securing, monitoring, fuelling of the generator and purchase of stationery. Apart from income generation and sustainability, it may encourage the governance system, from which a rich flow of information dissemination may emerge, so that greater value is attached to the dynamics in the supply of potable water. A participant said:

"I believe that payment of water rates by consumers- apart from generating revenue, creates a sense of awareness, it creates a sense of value for the infrastructure" (BO-WS-P27).

Findings reveal that, although there is the general view supporting payment of water tariff, whatever is paid should not be prohibitive. One of the participants commented thus:

"Those who are benefitting from the scheme, should be able to at least, pay little money" (AC-WS-P12).

Affordability is of essence in the payment of water rates (Chapter 4.12.1). There may be misconceptions about whether rural people should pay or not pay for water supply. However, Human Rights to water does not subscribe to free water supply, but affordability. The General
Comment No. 15 highlights that, in order to ensure affordability of water, States should adopt the necessary measures that may notably, include appropriate pricing policies, such as free or low-cost water. The statement presupposes that in certain circumstances, access to safe drinking water and sanitation might have to be provided free of charge if the person or household is unable to pay for it (UN Habitat and WHO, 2014). Examples of those who may lack pecuniary capacity are those with physical or mental disability, the aged and the abjectly poor.

Findings indicate that payment of water rates should enable the sustainability of the PWG for potable water supply. Two participants commented thus:

“I think they should be encouraged in order to keep the system running” (BO-UV-P44)

“They must collect rates, for the project to be sustainable” (CSO-OS-P28).

Sustainability indicates that, for PWG to be adjudged as effectively enabling rural community regular potable water supply, continuity of supply in perpetuity, is a critical requirement (Brundtland Commission WCED, 1987).

Majority of the participants expressed the view that consumers of potable water supply, under the PWG should pay for water usage. However, a few contrary opinions were expressed. A participant said:

“Most times, people don’t even see water to drink or fetch. Either the pipelines are bad or people are not getting the water, so they feel reluctant to pay the water rates” (BO-WS-P10).

Despite the general perception that water is a valuable asset and should be paid for, those who expressed opinion for non-payment of water rates were few (Appendix 9.25) and their reactions were reasonable responses to the existing non-availability of the resource in Nigeria.

8.27 MAJOR BARRIERS TO PAYMENT OF WATER RATES IN PARTICIPATORY WATER GOVERNANCE

Analysis shows that a predominant barrier to payment of water rates is ‘poverty’, although several plausible and interesting reasons have also been expressed (Appendix 9.26). From the findings, a major barrier to payment of water rates at the rural community level is poverty, which reflects in the inability to pay water rates. One of the participants said:

“People abstain from payment, because of the poor nature of our community” (HC-WS-P4).

Poverty indicates the state of a person with insufficient resources (Merriam-Webster Dictionary, 2015). It covers a wide range- from extreme want of necessities, to an absence of material comforts. Poverty is notably, the most prevalent challenge of rural members or slum dwellers in accessing potable water. A participant said:

“Poverty- the rural people are all struggling, they don’t have money to pay” (CCJ-WS-P17).

The World Bank declared that, Nigeria has one of the most vibrant economic growth rates averaging 7.4% (World Bank, 2014). This buttresses the fact that the country has sufficient wealth in terms of human and natural resources, which may only need prudent management for sustainability. A typical example of natural resources is oil exploration, which is a major source of wealth, supporting commerce and industry in Nigeria. However, a contra-indication to the perceived wealth is that, rural community members are poor (Azaiki, 2009), due to several
reasons. Political instability has largely caused income inequality, inequitable distribution of social services, ethnic conflict and corrupt practices. These indices undermine the right of citizens to freedom from discrimination. They contradict the provision of the Constitution of the Federal Republic of Nigeria 1999 that:

“No citizen of Nigeria shall be subjected to any disability or deprivation, merely by reason of the circumstances of his birth”

The CFRN 1999 provision has nexus with the right to water, which is not however, constitutionally provided. The African Charter on Human and Peoples’ Rights (Ratification and Enforcement) Act 2004, which is an International Law provides that, every citizen shall have the right of equal access to the public service of his country. Every individual shall also have the right of access to public property and services, in strict equality of all persons before the law. These provisions are laudable in the declaration for equitable distribution of amenities. However, the facts on ground point to the contrary in Nigeria, so that, the provision of the Water Resources Act 1993, that the Minister has the powers to fix and levy water rates may incur controversies in the light of inaccessibility of potable water, particularly for the rural poor.

8.28 LAWS AND POLICIES: COURT OF LAWS ROLE IN PARTICIPATORY WATER GOVERNANCE

From the analysis, the highest frequency on how the Court of Laws protect potable water supply is to ‘condemn violation of rules’ (Appendix 9.27). Another relevant phrase frequently used for the purpose is ‘prosecute breach of Human Rights’ (Appendix 9.27). From the findings,

213 Chapter IV Fundamental Rights, Section 42 (2)
214 (Cap A9, Laws of the Federation of Nigeria), Article 13, Section 2
215 Ibid, Article 13 (2)
216 Ibid, Article 13 (3)
217 Sections 14, 15 and 16
defaulters of PWG rules may be prosecuted in the Court of Laws. Thus, the Courts may protect water supply, when the rules governing it are breached. Typical example is the non-payment of water rates. A participant said:

“Where you already have a legal framework from the social community’s agreement- like fixing a particular rate and where this is not paid, such defaulters can be taken to Court” (CCI-OS-P34).

Courts may address disobedience to established rules when complaints are presented before it. The Courts may, thus, punish the offender upon proof of the offence. A participant commented thus:

“Call the people to order when there is disobedience and where, there is complaint and others” (BO-UV-P44).

Findings show that Courts also have the power to give judgment against a water scheme beneficiary, who refuses to furnish consideration by paying the water rates. A participant commented thus:

“Legal actions could be invoked, where the person took the benefit of the scheme and refuses to (maybe) pay the water rates” (AC-WS-P12).

The protection of water is one of the major challenges of society (Trelease, 1977). Water- being a major constituent of Environmental Law remains problematic and has a ripple-effect on the judiciary. Environmental Law is however, considered as one of the success stories of the past twentieth century (Lazarus, 2004). A major reason ascribed, is the role of the judiciary as custodians of the interpretation of enactments. However, Judges have never found it easy addressing legal convictions in matters concerning environmental protection, due to legal huddles created by the Common Law (Chapter 3.2.4). Nor has it been any easier, in matters of statutory and constitutional interpretations, concerning environmental protection- with particular reference to water supply. However, despite the hurdles, it is the role of Judges to
interpret the law, but where doubts emerge, a Judge may examine the statutes or the policies pertaining to water supply for clarification. This can shape law towards the preservation and sustainability of the resource.

The Court’s role extends to the adjudication of matters under a pluralised legal system. Thus, Courts do not reject litigations connected with water supply when it pertains to Customary Law. The rules of customary adjudication vary from the Common Law, Equity or enactments (Chapters 3.1, 3.2.6), but, the Court is bound to apply rules based on the litigation and evidence before it (Hart, 2012). Thus, while Court’s attention may rivet on the repugnancy test to verify the validity of a Customary Law as was done in Edet v Essien\textsuperscript{218}, it may rely on the rules of the Common Law, Equity and enactments for non-customary litigations.

Courts possess the power of granting injunctions, fines, declarations, remediation orders or imprisonment on any matter pertaining to water supply and its protection (Atiyah, 1995). However, in spite of the difficulties, the role of the Court is made explicit in the American case of Calvert Cliffs’ Coordinating Committee v United States Atomic Energy Commission\textsuperscript{219}. It was a matter, which involved a challenge (based on the enacted National Environmental Policy Act)\textsuperscript{220} to the Atomic Energy Commission’s regulations, for the consideration of environmental issues. Justice Wright said:

“These cases are only the beginning of what promises to become a flood of new litigations, seeking judicial assistance in protecting the natural environment. Several recently enacted statutes attest to the commitment of the government to control, at long last, the destructive engine of material progress. But it remains to be seen, whether the promise of this legislation will become a reality. Therein lies the judicial role... Our duty, in short, is to

\textsuperscript{218} [1932] 11 N. L. R. 47, 48
\textsuperscript{219} [1971] 449 F. 2d 1109 (D. C. Cir.)
\textsuperscript{220} 1969
see that important legislative purposes heralded in the halls of congress are not lost or misdirected in the vast hallways of the federal bureaucracy” (Lazarus, 2004).

Courts also play roles in litigants’ applications for remedies. However, it sometimes results in legal arguments and controversies. An example may be cited in United States of America v Metropolitan District Commission\textsuperscript{221}, on a Court ordered remedy, which required the Commonwealth of Massachusetts to hand over its Water Resources Authority power to acquire a suitable land fill site, while forbidding the state from hooking up any new sewer lines, which empties into Boston Harbour until it had done so. Another example is found in Reserve Mining Co. v EPA\textsuperscript{222}, when a Judge ordered the Reserve Mining Company from dumping taconite into the Lake Superior. The regional Court of Appeals modified the injunction on the basis of health risks, giving the company time to find another land-based disposal site before ordering any more dumping into the lake.

From findings, where there is a breach of Fundamental Human Rights, the Courts have the power to adjudicate. A participant disclosed that:

“\textit{When there is a fundamental breach- that is, the Human Rights is breached, individuals can rush to the Court because, that is the last hope of the common man}” (AC-OS-P29).

Thus, a breach of Fundamental Human Rights may be alleged, when bodily harm is caused as a result of matters regarding potable water supply. One of the participants commented that:

“\textit{If such sanctions cause bodily harm to the individual}” (CSO-OS-P28).

\textsuperscript{221} [2008] 528 F. Supp. 2d 7
\textsuperscript{222} [1975] 514 F. 2d 492, 537
The litigant may cite Section 34 (1a) of the 1999 CFRN, which provides that no person shall be subjected to torture or to inhuman or degrading treatment. The plaintiff may also sue based on the provision of the Criminal Code Act, alleging that an assault was committed against his person. An assault is an unlawful act constituting an offence, unless it is authorised or justified or excused by the law. There are various kinds of assault, which the law has defined with varying degrees of punishments, ranging from one year to fourteen years imprisonment, while a simple assault is a misdemeanour, which is a penalty of at least one year imprisonment. A Plaintiff may allege breach of Fundamental Human Rights, when a fine is unjustly applied or a community member is unjustly deprived from water supply. A participant said:

“If a task force member for instance, goes out of his way because of a personal animosity, to impose a fine or to stop somebody from fetching water and the community is not doing what it should do- like one of the things you mentioned earlier, of course people could seek redress in Court” (MH-UV-P48).

In this instance, an injured rural community member may be in order to cite the provision of the Constitution of the Federal Republic of Nigeria 1999. While a litigant may be able to argue that the imposed fine diminished litigant’s dignity and caused disrespect of person, it may be difficult to succeed in a suit based on deprivation of potable water. This is because, the constitution has no express provisions for the right to water. However, section 33 (1) on the right to life may be cited along with Section 34 (1a), since water is regarded as life, due to its multiple usage, implications for good health and connectedness to other sectors (Chapter 2.2.3).

Reference may also be made to international provisions.

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223 1999
224 2004 (Cap C38 LFN) Section 252
225 Ibid, Section 253.
226 Chapter IV, Section 34 (1a)
227 Ibid, Section 34 (1)
8.29 IMPLICATIONS OF FINDINGS ON THE CONCEPTUAL FRAMEWORK FOR PARTICIPATORY WATER GOVERNANCE

The primary aim of the interview was to elicit varying information from the participants on the conceptual framework for PWG. The exercise gave the researcher a window of opportunity, to answer the research question on how the PWG conceptual framework may be effectively used to support the legal framework for potable water supply in the rural communities of Nigeria. Findings from the transcripts were used to refine the conceptual framework (Figure 9.1).

8.30 RURAL ADVISORY BOARD TECHNIQUES FOR PARTICIPATORY WATER GOVERNANCE

Potable water supply carries with it several complexities. In identifying these, the study acknowledges that there are management techniques necessary for actualising the PWG. Those techniques were, therefore, formulated for specificity and thereafter, proposed. The major purpose of the study is the advocacy for the development of a PWG framework, necessary in supporting the existing legal framework for an effective potable water supply in rural communities. The techniques are, therefore, limited for the purpose.

In the advocacy for rural community members’ participation in potable water supply, the study relied on the RAB, which is the elected governing body. The RAB may proceed in managing the potable water supply, by using the principles of TAP. The RAB members may eschew the concept of participation by delegating some powers to the CTF, which may explore community norms and values, in which the specific tool of ostracism may be adopted. Ostracism is a sanction method traditionally instituted and anchored on the ethos of the rural community members. The RAB and the community members involved in the governance may be guided by enabling laws and policies, setting up the provision of potable water supply in Nigeria (Figure 8.2).
8.31 SUMMARY OF THEMATIC ANALYSIS

The summary is presented to show the input of participants, based on their local governments and to pinpoint their contributions, based on their category distribution and their designation (which refers to their life-position). The criteria for categorization had been indicated in a matrix in the foregoing (Table 6.7). The input of the participants directly resulted from their perceptions of the PWG conceptual framework, in which semi-structured interview was explored to elicit multiple responses (Table 8.1). The presentation of the summary of thematic analysis may also serve for purpose of transferability in other subsequent researches.
### Table 8.1: Summary of thematic analysis based on highest frequencies

<table>
<thead>
<tr>
<th>MAJOR THEMES</th>
<th>SUB-THEMES</th>
<th>PERCEPTIONS OF HIGHEST FREQUENCIES</th>
<th>FROM 54 NO. OF PARTICIPANTS</th>
<th>NO. FROM LOCAL GOVERNMENT</th>
<th>CATEGORY DISTRIBUTION</th>
<th>NO. OF PARTICIPANTS</th>
<th>DESIGNATION</th>
<th>NO. OF PARTICIPANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptual Framework of PWG</td>
<td>Participants’ perception of the conceptual framework</td>
<td>Acceptable</td>
<td>50 18 16 16 Rural Community</td>
<td>12 Grassroots</td>
<td>12</td>
<td></td>
<td></td>
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<tr>
<td>Stakeholders</td>
<td>Initiators of PWG</td>
<td>NGOs</td>
<td>29 14 8 7 Rural Community</td>
<td>5 Grassroots</td>
<td>10</td>
<td></td>
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<tr>
<td></td>
<td>Decision-makers of PWG</td>
<td>Rural Community and Government</td>
<td>47 15 14 18 Rural Community</td>
<td>9 Head of Community</td>
<td>9</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Rural community members</td>
<td>Users of water</td>
<td>53 18 17 18 Rural Community</td>
<td>12 Grassroots</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potable water provision</td>
<td>Donor/Corporate organisation/NGOs’ role in PWG</td>
<td>Initiate water supply</td>
<td>22 10 8 4 Rural Community</td>
<td>5 Grassroots</td>
<td>5</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Government’s role in PWG</td>
<td>Initiate water scheme</td>
<td>20 7 5 8 Rural Community</td>
<td>5 Head of Community</td>
<td>5</td>
<td></td>
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<tr>
<td></td>
<td>Individual’s role in PWG</td>
<td>Water needs</td>
<td>17 6 7 4 Rural Community</td>
<td>10 Grassroots</td>
<td>10</td>
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<td></td>
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<tr>
<td>RAB in PWG</td>
<td>Formation of the RAB</td>
<td>Election</td>
<td>41 16 14 11 Rural Community</td>
<td>9 Grassroots</td>
<td>9</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Role of the RAB</td>
<td>Division of labour</td>
<td>21 7 9 5 Rural Community</td>
<td>4 Head of Community</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Information</td>
<td></td>
<td>21 9 7 5 Rural Community</td>
<td>6 Grassroots</td>
<td>6</td>
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<tr>
<td></td>
<td>Effective management of the RAB</td>
<td>TAP</td>
<td>28 13 9 6 Rural Community</td>
<td>6 Grassroots</td>
<td>6</td>
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<tr>
<td></td>
<td>Evaluation of the RAB</td>
<td>Information</td>
<td>20 3 11 6 Rural Community</td>
<td>8 Grassroots</td>
<td>8</td>
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<td></td>
<td>Good water Governance in PWG</td>
<td>Transparen</td>
<td>Information</td>
<td>34 11 12 11 Rural Community</td>
<td>6 Grassroots</td>
<td>6</td>
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<tr>
<td></td>
<td>Accountability</td>
<td>Regular supply of water</td>
<td>22 10 6 6 Rural Community</td>
<td>6 Grassroots</td>
<td>12</td>
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<tr>
<td></td>
<td>Participation</td>
<td>Community involvement</td>
<td>26 10 8 8 Rural Community</td>
<td>7 Head of Community</td>
<td>7</td>
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<tr>
<td>Task Forces in PWG</td>
<td>Effect of Community Task Forces</td>
<td>Enforcement</td>
<td>22 8 10 4 Rural community</td>
<td>4 Head of Community</td>
<td>4</td>
<td></td>
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<tr>
<td></td>
<td>Mechanism for accountability in PWG</td>
<td>Collection of water rates</td>
<td>Selected rural people</td>
<td>26 8 8 10 Rural Community</td>
<td>8 Grassroots</td>
<td>8</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Security of infrastructure</td>
<td>The community</td>
<td>17 3 8 6 Rural Community</td>
<td>6 Head of Community</td>
<td>6</td>
<td></td>
<td></td>
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<tr>
<td>Maintenance of infrastructure</td>
<td>Experts</td>
<td>Rural Community</td>
<td>Grassroots</td>
<td></td>
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<tr>
<td>Monitoring of PWG Community</td>
<td>19</td>
<td>5</td>
<td>5</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Payment of salary in PWG Rural Community</td>
<td>18</td>
<td>4</td>
<td>8</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Customary Norms and values</th>
<th>Varieties of community sanctions Ostracism</th>
<th>Rural Community</th>
<th>Grassroots</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects of community sanctions Deterrence</td>
<td>Community Social Organisation</td>
<td>3</td>
<td>Chairman</td>
</tr>
<tr>
<td>Community sanctions and cultural implications Yes</td>
<td>Rural Community</td>
<td>3</td>
<td>Grassroots</td>
</tr>
<tr>
<td>Laws and Policies Payment of water rates in PWG Pay water rates</td>
<td>Rural Community</td>
<td>9</td>
<td>Grassroots</td>
</tr>
<tr>
<td>Major barriers to payment of water rates in PWG Poverty</td>
<td>Rural Community</td>
<td>4</td>
<td>Head of Community</td>
</tr>
<tr>
<td>The role of courts in PWG Condemn violation of rules</td>
<td>Rural Community</td>
<td>5</td>
<td>Grassroots</td>
</tr>
<tr>
<td>Prosecute breach of Human Rights</td>
<td>Rural Community</td>
<td>4</td>
<td>Grassroots</td>
</tr>
</tbody>
</table>

| Communitysanctions and cultural implications Ostracism | Rural Community | 3              | Grassroots |
| Effects of community sanctions Deterrence | Community Social Organisation | 3              | Chairman    |
| Community sanctions and cultural implications Yes | Rural Community | 3              | Grassroots |
| Laws and Policies Payment of water rates in PWG Pay water rates | Rural Community | 9              | Grassroots |
| Major barriers to payment of water rates in PWG Poverty | Rural Community | 4              | Head of Community |
| The role of courts in PWG Condemn violation of rules | Rural Community | 5              | Grassroots |
|Prosecute breach of Human Rights | Rural Community | 4              | Grassroots |
8.32 CHAPTER SUMMARY

The chapter drew on the participants’ perceptions in arriving at the findings, through which answers to the research question emerged. Linkages to the literature review and the conceptual framework were established as sources for the interview questions, by reflecting participants’ perceptions in the transcripts. Thus, the chapter discussed the findings by reference to the evidential provision in transcripts excerpts, while this had support in the literature review and the researcher’s reflexivity. Summary of thematic analysis was provided for transferability, implications of the findings were briefly examined and techniques, which may be explored by the RAB were also identified in the chapter.
CHAPTER 9: CONCEPTUAL FRAMEWORK REFINEMENT AND VALIDATION

9.0 INTRODUCTION

The chapter development is pursuant to the provision of Objective-8 on refinement of the conceptual framework and the validation of study findings. This chapter presents the refinement of the conceptual framework for PWG. It is based on the study findings, emanating from the inquiry process. The input of the refined conceptual framework is presented, its constituents are expressly located, while the chapter provides information on same. The findings are validated by using techniques, which support reliability and validity, such as validation through researcher’s determination of saturation point, triangulation, descriptive perceptions and feedback from experts on potable water supply, who provide answers to questionnaires, in which variables were selected and comments made.

9.1 THE INPUT OF THE CONCEPTUAL FRAMEWORK

The deductive strategy, which may also be referred to as ‘conceptual’ or ‘enumerative’ (Kaplan, 1964; Popper, 1968) was explored in this study. The study formulated some constructs and propositions, which were then subjected to inquiry by matching them with series of field data. The study commenced with a preliminary conceptual framework (Wolcott, 1992) as a generalized model, which later metamorphosed into a refined version. The conceptual framework was designed into stakeholders’ groups, consisting of the initiators, decision-makers, RAB, the CTF and the Court of Laws. The relationships and influence have been imputed into the framework (Figure 9.1). The different roles of the constituents had been stated in the foregoing (Chapters 5 and 8), while information on them has also been provided in the following section (Chapter 9.2).
9.2 Refined conceptual framework information discussion

The major aim of the refined conceptual framework is to support and improve existing legal framework for potable water supply in Nigeria. It is specifically designed for rural communities. It may be applied, to enable effective management of water supply in any rural community of Nigeria and other neighboring states with similar cultural traditions.

Relevance of the framework in the potable water sector may be necessitated by the impact of potable water supply on human life and its relationship with other developmental sectors, such as education, health, environment, agriculture and economics. Functionality of the refined conceptual framework gives it a novel quality. The RAB reliance on customary traditional ethos as one of the governance tools, encourages participation. Thus, the conceptual framework is devoid of the characteristic abstractedness of alien potable water models. Information in the refined conceptual framework reflects the initial conceptual framework, based on literature review. It is also based on the research findings, which emerged from the results of the inquiry, provided from participants’ perceptions. The refined conceptual framework for PWG for rural communities consists of major constituents, discussed in the following:

Initiators: Contextually, they are stakeholders, who may initiate proposals for PWG for rural community. Rural communities, Donors (such as corporate organisations, NGOs and government) may initiate PWG. NGOs are considered as focal points in this, arising from their interventionist activities in solving other people’s problems. The initiators’ first consultation is with the state government (represented by state actors in the Ministries of Water Resources, Health and Environment).
**Decision-makers:** Contextually, they are stakeholders, who take decisions on the proposal for PWG. The major ones are the rural community members (who are the beneficiaries). They cut across different representative segments of the rural community membership. The initiator is the stakeholder, connecting rural community members with the government (represented by the state actors from Ministries of Water Resources, Health, Environment and the Rural Water and Sanitation Agency). Decision-makers are involved in planning and carry out the following activities (Table 9.1).

**Table 9.1: Decision-Makers: Participatory Water Governance Planning Activities**

<table>
<thead>
<tr>
<th>MAJOR ACTIVITIES OF DECISION-MAKERS</th>
<th>SUBSIDIARY ACTIVITIES OF DECISION-MAKERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>They clarify the objective</td>
<td>It is the reformation of potable water supply management in the rural community.</td>
</tr>
<tr>
<td>They map out the stakeholders</td>
<td>Identifying and listing the stakeholders.</td>
</tr>
<tr>
<td></td>
<td>Process analysis of happenings in the water sector.</td>
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<tr>
<td></td>
<td>Identify existing problems. For example, issues on TAP, information, respect for Human Rights, politicization of water supply, economic and social protection in laws and policy management, access to Courts and justice, effectiveness in service delivery, which pertains to the following highlights:</td>
</tr>
<tr>
<td></td>
<td>- Protection of sources and state of potable water service coverage.</td>
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<td>- Water consumption control for efficient usage.</td>
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<td>- Revenue water metering.</td>
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<td></td>
<td>- Water-pipe network performance.</td>
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<tr>
<td></td>
<td>- Cost and staffing.</td>
</tr>
<tr>
<td></td>
<td>- Billing and collection of water rates.</td>
</tr>
<tr>
<td></td>
<td>- Financial performance.</td>
</tr>
<tr>
<td></td>
<td>- Infrastructure maintenance.</td>
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<tr>
<td></td>
<td>- Security and monitoring.</td>
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<tr>
<td></td>
<td>- Affordability.</td>
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<tr>
<td></td>
<td>- Other sectors` involvement.</td>
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<tr>
<td></td>
<td>- They may also discuss about Donors, such as corporate organisations and NGOs` role in PWG.</td>
</tr>
<tr>
<td>They carry out stakeholders` analysis, in which they discuss:</td>
<td>The formal powers, which pertains to the legitimate relationship of rural community with the state government.</td>
</tr>
<tr>
<td></td>
<td>The informal powers of the rural community, which may take cognizance of community norms and values and the rural community sanction methods, which may enable enforcement of PWG rules.</td>
</tr>
<tr>
<td>They further plan the stakeholders` engagement strategy:</td>
<td>Identify and specifically state the owner of the initiative.</td>
</tr>
<tr>
<td></td>
<td>State the names of stakeholders who may provide needed partnership.</td>
</tr>
<tr>
<td></td>
<td>State which stakeholders should be consulted for matters pertaining to water supply.</td>
</tr>
<tr>
<td></td>
<td>Identify the medium for information dissemination, which may provide awareness among rural community members.</td>
</tr>
<tr>
<td></td>
<td>They consider community participation as a critical issue that should give regard to gender equality in water supply.</td>
</tr>
<tr>
<td></td>
<td>They identify credible persons that may take up leadership positions in the RAB.</td>
</tr>
<tr>
<td></td>
<td>Finally, they conduct election on identified credible rural community members to occupy the RAB in the PWG.</td>
</tr>
</tbody>
</table>
The RAB: Elected community members constitute the Board for the PWG. The onus of responsibility for the sustenance of potable water supply predominantly reposes in them. They are empowered by adopting several techniques, which may enable performance and sustainability of the governance (Figure 8.2). The techniques of TAP, CTF, community norms and values, including laws and policies are discussed in the following paragraphs.

TAP: The principles of TAP, are envisaged to enhance the effectiveness of the governance of potable water supply. ‘Transparency’ indicates current flow of information from the RAB. The members are expected to be open in their transactions among the membership of the RAB. Openness should be seen in their relationship with the rural community members and the state actors from the Ministries of Water Resources, Health, Environment and the Rural Water and Sanitation Agency (RUWASA), who is their immediate reference point; They may also need to have trustworthy relationship with the initiator of the water project so that, input may be sustained. ‘Accountability’ is relevant, since the RAB may be held accountable for regular potable water supply, by which the successes and failures of the PWG may be evaluated. ‘Participation’ is fundamental to the governance system and by its adoption, the RAB may enable rural community involvement in the PWG, which may reflect in division of labour, enabling assignment of different roles.

CTFs: RAB may appoint the CTFs from among community members. Their major role is the enforcement of rules, to ensure user’s compliance. Mechanism for accountability should reflect in the various offices created, in which the CTFs are leaders from the Board itself. The offices take charge of payment of salaries, in which the community may be allowed to bear the burden, through their members, who are given the task; Security of infrastructure, which should be the responsibility of the community members. The youths, able-bodied men and members of
vigilante group are regarded as most suitable for this; Regular supply of water should be ensured by community experts, who may be retired civil servants from the public service (notably, the agencies for provision of water); Maintenance of infrastructure should be executed by community experts, where the maintenance is not complicated. Expert attention from the central body may, however, be required where the contrary is the case; Monitoring should be carried out by community members consisting of youths and men, heads of communities (traditional chiefs) and retired civil servants from the rural community. Monitoring may also be set up by an institution, such as the RUWASA. Collection of water rates should be by selected rural people, with proven accountability. These various roles played by the CTF, may serve as mechanisms for accountability by the RAB and may also be used to evaluate their performance. The RAB may equally be evaluated by the extent of information disseminated to the community users of potable water.

**Customary norms and values:** RAB is also expected to govern by relying on the customary norms and values. In relying on these, the members may need to identify whether, the particular norm has cultural implications and antecedents. Thus, the effect should serve a major purpose for deterrence from rules violation. Ostracism may be the best chosen community sanction method. Varieties of ostracism consist of voice, trade and excommunication from community functions. The sanction method of ostracism may enable payment of water rates. However, a major militating factor against this, may be rural community members’ poverty. Those who cannot afford the water rates- such as the aged and the physically challenged should be provided free potable water. This is because affordability is a major consideration for potable water supply.
Laws and Policies: The RAB may govern water supply by applying existing laws, regulations and policies, which support the protection of the resource. The laws and regulations are the instruments enacted by elected legislators, while ministries in charge of potable water supply, formulate the policies.

Rural community members: They are regarded as users of potable water and are expected to act within this capacity by playing their individual roles, which may serve water needs. While they are expected to observe the rules guiding the supply of potable water, they are precluded from Human Rights abuse. However, should they experience this in the course of the governance, they may avail themselves of legal opportunities by seeking redress in the Court of Laws or ask for legal remedies. The rural community members are entitled to be fully involved in the governance by appointments into offices, while also being provided with adequate information. This ensures that the PWG is duly on course as an effective process.

The Court of Laws: The Court serves as the bastion for justice providing all the stakeholders an open door to make complaints and seek redress without fear or favour. The Court of Laws may condemn violation of rules guiding the PWG as well as provide decisions against Human Rights infringements. These are some of the ways that the Courts may protect the supply of potable water to encourage sustainability.

9.3 CONCEPTUAL FRAMEWORK VALIDATION

The findings may be regarded as valid in the establishment of the themes, based on respondents’ perceptions. Respondents’ invitation to validate the findings encapsulated in the refined conceptual framework for PWG is critical. This may obviate the suspicion of bias and confirm the findings evolving, in a redefinition of the conceptual framework (Figure 9.1).
9.4 TECHNIQUES ADOPTED FOR THE VALIDATION OF THE REFINED CONCEPTUAL FRAMEWORK

Miles and Huberman (1994) and Creswell and Miller (2000) have suggested that, discussion of techniques explored for validation, should recognize as many as reasonably possible. In pursuant of this, the study utilized the techniques stated in the following sections.

9.4.1 Validation through researcher’s determination of saturation point

The researcher’s plan was to initially interview sixty-three participants. However, after fifty-four interviews, further emerging facts had a likelihood of repetition. The researcher, therefore, noted a saturation point. Fifty-four samples were considered adequate to provide needed tapestry of information, good themes emergence and the evolvement of data into an analysis, which would create a persuasive narrative (Patton, 1980). These aspects were achieved in this study, by exploring the purposive heterogeneous, homogeneous and criterion sampling techniques. The perceptions provided evidence for the major and sub-themes, while excerpts from transcripts were used as evidential support for the findings. This procedure was achieved by a recursive movement over the data, to ensure sense and understanding of the findings. The procedure adopted has been referred to as “validity-as-reflexive-accounting” (Altheid and Johnson, 1994).

9.4.2 Triangulation of research to create validation

Triangulation provided adequate opportunities to validate the study. Triangulation of complimentary methods and data sources produced convergence of conclusions (Mathison, 1988). Of the four types of triangulating methods advocated by Denzin (1978), the study adopted three, described in the following:
9.4.2.1 Multiple Theories Used in Single Research Question

There was need to provide an answer for the research question ‘How can participatory water governance framework be effectively used to support the legal framework for potable water supply in the rural communities of Nigeria?’ Multiple theories were explored to achieve the answer. By using the constructivist paradigm, the researcher carried out inquiries into how the research question could be answered. This was within the natural setting of Delta State of Nigeria and with samples from that setting. The samples provided multiple perceptions reflected in the results and, which were interpreted to get the findings. A refined conceptual framework emerged from the exercise.

The governance theory directed on the proposed achievement of effective management of the PWG. This was through the application of the principles of TAP in the RAB governance indicated in the conceptual framework for PWG. The theory of collaboration was used to indicate what other parties- such as Donors, who are corporate organisations and NGOs are capable of achieving for effective and sustainable potable water supply. This may be by collaboration with the rural community members. The theory of participation was explored by contextualization, in which community norms and values were harnessed as governing tools for the RAB, while the CTF served as enforcement tool.

9.4.2.2 Multiple Methods, Triangulated Between and Within Methods

The paradigm assumption lens of the researcher’s world view was used to create validity of the study. The constructivist/interpretive theories were explored to enable the interpretations of participants’ perceptions of the real world. The qualitative approach was the focal research methodology, the strategy for inquiry was based on the qualitative semi-structured interview and the sampling was by the exploration of the purposive strategy, which provided a broad
applicability of the sampling. The homogenous, heterogeneous and criterion sampling techniques were used to collect samples for data. Full descriptions of the original sample of persons may thus, enable adequate comparisons with other samples in similar future researches. Furthermore, in analyzing the data, the thematic analysis was used to analyze the codes generated by the Nvivo 10 software. Triangulation, thus, provided linkages between data collected and prior emerging theory. This may enable transferability of data, while at the same time, engendering reliability and validity.

9.4.2.3 Multiple Data Sets Collected Differently, Through Same Method Explored at Different Times or with Various Sources

There was a critical perspective, which marked another paradigm assumption, in which covert assumptions where unveiled by the researcher (Van Maanen, 1983). There were fifty-four sample sources, which provided various perceptions of the phenomenon under investigation at different times. These perceptions covered social, political, economic and cultural perspectives, which were coded, interpreted and analyzed to achieve study findings. This resulted in the refinement of the conceptual framework. By triangulating with this technique, a systematic relationship in concepts and internal coherence in the findings emerged (Strauss and Corbin, 1990; Eisner, 1991).

9.4.3 Descriptive Perceptions to Create Validation

Thick, rich descriptions, detailing social, cultural, political and economic perceptions were used. They captured samples’ views pertaining to the PWG framework. This complements the suggestion made by Denzin (1989b). Rich detailing of narratives provided a sense of understanding and a feeling of real situation, which vests the study with credibility. Context-rich and meaningful descriptions (Denzin, 1989b) were provided in plausible, convincing accounts.
The comprehensive accounts enabled understanding of local contexts (Campbell, 1986). Provision of thick descriptions of findings may enable transferability, appropriate for readers own settings.

9.4.4 Validation Through External Persons Who Provide Feedback

External persons, not conversant with the research but, regarded as experts in the dynamics of potable water supply, were invited to participate in the validation exercise. Experts are persons who have or show special skills or knowledge, because of what they have been taught or what they have experienced (Merriam-Webster dictionary, 2015). The experts were invited to examine the refined conceptual framework for PWG, provide answers to quantitative survey questionnaire of close-ended questions and make comments, where it was considered necessary. This is referred to as providing ‘feedback’. This technique has been successfully used by many researchers (Melnick and Beaudry, 1990; Warner, 1991). Miles and Huberman (1994) in rationalizing the use of this technique, suggested that it provides an extension of research knowledge on the phenomenon to be validated; The researcher knows better of what is already known; More supportive evidence of the research is provided; Feedback process provides a procedure devoid of haphazardness, so that findings are clearly and systematically presented for readers’ scrutiny. Details have been provided in the study (Tables 9.4 to 9.17).

9.5 DEVELOPMENT OF VALIDATION QUESTIONNAIRE

The survey questionnaire has been described as a research tool, in which people are required to respond to the same set of questions in a predetermined order (deVaus, 2002 and Gray 2004). It may be explored to gain a view into the water sector and the people concerned (Henn et al., 2008). The use of the survey questionnaire may also be for descriptive and analytical purposes to discover facts, opinion and views (Blaikie, 2000). Thus, the strategy may be used for
descriptive and explanatory requirements in a study (Naoum, 1998). Various techniques may be adopted to apply the survey questionnaire on respondents. Self-completed questionnaires are completed by respondents themselves (Saunders et al., 2012). The questionnaire may be sent electronically via the internet (internet-mediated or web-based questionnaire) or by intranet (intranet-mediated), by post or mail (postal or mail questionnaire) or delivered by hand to the respondents and later collected (delivery and collection questionnaire) (Saunders et al., 2012). In this study, the questionnaire was sent to the six respondents, via the electronic mail. This was a deliberate avoidance of costs of dissemination of the document to respondents in Nigeria. The medium was an assured one, since the respondents are all computer-literate and there was confidence that the right persons would respond (Saunders et al., 2012). Considering the foregoing reasons for the use of survey questionnaire, this study adopted its use and designed the questionnaire primarily, to elicit information on the refined conceptual framework for PWG. The information was intended as a feedback on the findings in the initial inquiry of the phenomenon of PWG framework. It was also deliberately intended that the questionnaire should be fairly short, simple and completed within thirty minutes. The questions consisted of close-ended multiple choice questions, which required ticked-box responses. The study also made provision for respondents to contribute comments in free text forms, regarding any views or suggestions they deemed necessary for any of the questions. There was a letter of introduction prior to the administration of the questionnaire (Appendix 13). The validation questionnaire (Appendix 13) was designed in two sections, addressed subsequently. Section A contained respondents’ background information. This consisted of the name, profession, designation, expertise, qualification and years of experience. Section B contained questions on the general impression of the refined conceptual framework. Respondents were further invited to make comments were considered necessary. Quantitative data implies the use of some numerical data that may be usefully quantified to enable the answering of research questions.
However, they may range from simple counts of the frequency of occurrences to more complex data (Saunders et al., 2012). In the use of quantitative approach in this section, this study has adopted the use of simple counts of frequencies of occurrences, within the set of questions. However, the thematic analysis was explored to identify the highest variables, while provision of excerpts served as the evidence of respondents’ perceptions (Spencer et al., 2003).

**9.6 SELECTION OF EXPERTS**

The qualitative purposive strategy was explored in the selection of six external experts from different institutions and designations. Their selection was based on homogeneity, since they are all from Delta State of Nigeria. Their selection was also heterogeneous, since they function from different offices. The criteria for selection was their expertise either directly or in connectedness with potable water supply.

**9.6.1 Profile of Validation Experts**

Profile of the validation experts is presented in the study (Table 9.2). Respondents were selected from different professions, designations, expertise, qualification and years of experience. They are conversant with the dynamics of potable water supply in Nigeria. The level of experience gathered over the years demonstrates that the respondents are in good standing to give knowledge-based opinion for the validation of findings in the study.

**Table 9.2: Profile and selection of validation experts**

<table>
<thead>
<tr>
<th>Experts name</th>
<th>Institution</th>
<th>Designation</th>
<th>Expertise</th>
<th>Qualification</th>
<th>Years of experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>VE-DSJ-1</td>
<td>Delta State Judiciary</td>
<td>Chief Judge</td>
<td>Legal (Customary Laws)</td>
<td>LLB, BL</td>
<td>Thirty-five years</td>
</tr>
<tr>
<td>VE-ME-2</td>
<td>Ministry of Environment</td>
<td>Civil servant</td>
<td>Environment/Accounting</td>
<td>BSC Accounting</td>
<td>Six years</td>
</tr>
<tr>
<td>VE-MWR-3</td>
<td>Ministry of Water Resources</td>
<td>Civil Servant</td>
<td>Ecology</td>
<td>MSC Forest Resource Management</td>
<td>Twenty-six years</td>
</tr>
</tbody>
</table>
9.6.2 Results of Analysis on Validation of Refined Conceptual Framework Through Respondents’ Feedback

The results of the analysis for the frequencies in the responses to the inquiry by survey questionnaire on the refined conceptual framework is shown in this section (Table 9.3).

Table 9.3: Results of analysis on validation of refined conceptual framework by respondents (experts)

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>VARIABLES</th>
<th>NO. OF RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Does the framework address important problems in the management of sustainable potable water supply?</td>
<td>1 Yes, quite significant</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>2 Yes, but not significant</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>3 No, it would make no difference</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>4 Not sure of its significance</td>
<td>0</td>
</tr>
<tr>
<td>2  Would you say the framework is capable of assisting the potable water sector in the participation of stakeholders in the rural community?</td>
<td>1 Yes, it is capable</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>2 No, it is not capable</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>3 Not sure if it is capable</td>
<td>0</td>
</tr>
<tr>
<td>3  Would you say the framework is simple to understand with little or no practical difficulties?</td>
<td>1 Yes</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>2 No</td>
<td>2</td>
</tr>
<tr>
<td>4  Would you say the framework is clear and easy to understand with little or no practical difficulties?</td>
<td>1 Yes</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>2 No</td>
<td>0</td>
</tr>
<tr>
<td>5  If you answered ‘No’ in Q3/4, please, provide comments in specific aspects of the framework, which in your view, are likely to cause major difficulties in its use.</td>
<td>Nil</td>
<td></td>
</tr>
<tr>
<td>6  What is your opinion of human resources needed to apply the framework in real life selection exercise?</td>
<td>1 It would be too cumbersome to operate</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>2 It would not be too cumbersome to operate</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>3 The benefits of using the framework justify any human resources requirements</td>
<td>4</td>
</tr>
<tr>
<td>7  What is your opinion of the description of the refined conceptual framework and its lay-out?</td>
<td>1 It is adequate</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2 It is not adequate</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>3 It is comprehensive</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>4 Not sure</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>1 Yes</td>
<td>1</td>
</tr>
</tbody>
</table>
In your opinion, is there any further matter of importance which ought to be included or considered in the refined conceptual framework?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
</tr>
<tr>
<td>Not sure</td>
<td>1</td>
</tr>
</tbody>
</table>

If ‘Yes’ to Q8, please, specify in the comment box Nil

What is your opinion of the RAB governance techniques?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>They are suitable</td>
<td>5</td>
</tr>
<tr>
<td>They are not suitable</td>
<td>0</td>
</tr>
<tr>
<td>I am not sure of their suitability</td>
<td>1</td>
</tr>
</tbody>
</table>

Are there any other governance techniques, which you consider important in the participatory water governance by the RAB?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
</tr>
<tr>
<td>Not sure</td>
<td>1</td>
</tr>
</tbody>
</table>

If you answered ‘Yes’ to Q11, please, specify in the comment box Nil

What is your opinion of the criteria used for the evaluation of the RAB in the participatory water governance?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is very suitable</td>
<td>3</td>
</tr>
<tr>
<td>It is suitable</td>
<td>2</td>
</tr>
<tr>
<td>It is not suitable</td>
<td>0</td>
</tr>
<tr>
<td>I am not sure of the suitability</td>
<td>1</td>
</tr>
</tbody>
</table>

In your opinion, are there any other criteria for evaluating the RAB that have not been mentioned?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>0</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
</tr>
<tr>
<td>Not sure</td>
<td>2</td>
</tr>
</tbody>
</table>

If you answered ‘Yes’ to Q14, please, list the criteria that ought to have been considered in the box Nil

9.6.3 General Views on Validity of Findings on Refined Conceptual Framework

In the validation exercise, respondents were invited to express general views about the refined conceptual framework. Majority of the six validation respondents considered the findings valid.

To corroborate their views, some of them made the following comments:

“Sound principles of water management scheme and sustainable development in Nigeria - be it for domestic, industrial or agricultural activities in its use - as long as there is transparency, accountability and participation in the designed framework, which is a fundamental objective. It is a right to be integrated, into the Nigerian constitution, politics and programs. The framework, in my respectful view, is environmentally sustainable for participatory water scheme in Nigeria” (VE-DSJ-1).

Another validation respondent expressed the following comment:

“The framework is valid” (VE-ME-2).

A third validation respondent said:
“Bottom-to-top approach adopted makes room for enough resources to drive the framework” (VE-MWR-3).

A fourth validation respondent commented that:

“The framework is great. It is clear and provides a structure in understanding and implementing rural water board governance, community participation, enablers and community based deterrents. It addresses accountability mechanisms and is poverty-centric, providing a means whereby, the poor and vulnerable population cannot only access water, but also, participate in decision-making” (VE-PH-4).

However, the fifth validation respondents expressed scepticism on the adequacy of clarity provided in the framework thus:

“The framework essentially captures the governance structure and also attempts to highlight the barriers. The flow in the diagram may require some assurance as it does not appear enough clarity is provided” (VE-CO-5).

The sixth validation respondent also expressed scepticism on the practicality of the refined conceptual framework, due to the major barrier, which may inhibit payment of water rates, thus:

“The framework is good as it is, in principle. It may be difficult to implement in practice, due mainly to the major barriers identified with the attendant benefits lost. Apathy and abstinence could set in by rural users” (VE-MWR-6).

With regard to the last but one comment (VE-CO-5), clarity has been provided in the study (Chapter 9.2). In considering the last comment (VE-MWR-6), the respondent focused mainly on the barrier of poverty against the payment of water rates by rural community users. In the literature review and the analysis of findings, the issue was addressed. It was stated that, although payment of water rates is necessary for PWG sustainability, affordability is equally an important issue to be addressed by the RAB. Secondly, where certain rural community users are identified as being abjectly poor, so that potable water is unaffordable, it should be provided
free. Examples of such persons are the vulnerable—due to physical or mental disability, agedness or abject poverty (Chapters 8.26 and 9.2).

Feedback on validation of findings in the study is hereby presented (Chapter 9.6.4 to 9.6.18). The feedback is based on close-ended interview in a survey questionnaire conducted via the email, with the six respondents.

9.6.4 Feedback on Whether Refined Conceptual Framework Addresses Important Problems in the Management of Sustainable Potable Water

It is important to validate the findings in the research, but, it is necessary to primarily identify whether, the refined conceptual framework may be relied upon to resolve important management problems, affecting the potable water sector in the rural communities of Nigeria. Analysis of validation results indicates that five respondents are quite convinced of the significance of the refined conceptual framework in addressing the challenges. One of the respondents is of the opinion that, although the conceptual framework may be relied upon, but not significantly so. None of the respondents is of the view that the conceptual framework will make no difference in the potable water sector, while none of the respondents identified with ‘not sure of the significance’ in the water sector (Table 9.3: Question 1). One of the respondents said by way of suggestion that:

“Participation and synergies among relevant stakeholders will ensure desired result”
(VE-MWR-3).
9.6.5 Feedback on Whether Refined Conceptual Framework Can Assist the Potable Water Sector in the Participation of Rural Community Stakeholders

Since the concept of participation is the focus of the study, it was, therefore, considered necessary to ascertain whether the refined conceptual framework may encourage participation of rural community members in the potable water governance. Analysis of validation result shows that, six respondents answered in the affirmative, none expressed the view that the conceptual framework will not be capable nor did any of the respondents express doubts about this (Table 9.3: Question 2). One of the respondents made this comment:

“In my work in the rural communities in Nigeria, a key issue is not the initiation of community water board projects, but rather, the governance mechanisms that undergird such projects and thus, determine the sustainability, use and acceptance by the community, poor and vulnerable groups. This framework addresses the key issues in rural participatory governance in the provision of potable water. For example, while highlighting the roles of initiators of the rural water board projects, it most importantly addresses how to sustain the effective input of such initiators in addition to being culturally responsive” (VE-PH-5).

9.6.6 Feedback on Whether Refined Conceptual Framework is Simple to Understand with Little or no Practical Difficulties

Taking into consideration that a complicated conceptual framework may undermine the understanding of policy-makers and readers, analysis of validation result shows that the question directed at the respondents was answered by four of them who affirmed that, it was a simple framework, while two others said it was not a simple one (Table 9.3: Question 3). However, in agreeing that the refined conceptual framework is a simple one, a respondent suggested that:

“Involving the stakeholders and grassroots mobilizers will make its practicality simple” (VE-MWR-3)
9.6.7 Feedback on Clarity and Easy Understanding of Refined Conceptual Framework with Little or no Practical Difficulties

While simplicity may be different from clarity, analysis of validation result shows six participants expressed the opinion that the conceptual framework has clarity, which makes it easy to be understood (Table 9.3: Question 4). A respondent commented that:

“The framework is explicit” (VE-CO-4)

9.6.8 Comments Where ‘No’ was Answered in Q3/4

Validation results show that nil response was returned for the question. The implication is that, in spite of skepticism expressed in question 3 by two respondents, the framework was considered unanimously by the six respondents as simple and easy to understand (Table 9.3: Question 5).

9.6.9 Feedback on Opinion of Human Resources Needed to Apply the Refined Conceptual Framework in Real Life Selection Exercise

In order to assess how easy or difficult it may be for the governance system, when the human tools are used in real life implementation of the refined conceptual framework, six respondents were interviewed. Validation result shows that none of them considered that the usage will be too cumbersome. Two were of the view that the refined conceptual framework may not be too cumbersome to use. Four respondents considered that there is justification for the requirements of the human resources when the benefits accruing to the use of the framework are considered (Table 9.3: Question 6). One of the respondents commented that:

“There is enough human resources evenly distributed” (VE-ME-2).
9.6.10 Feedback on Opinion of the Description of the Refined Conceptual Framework and its Lay-out

In order to assess the comprehensiveness of the framework, which is expected to address pertinent issues in governance, the six respondents answered the question. Validation result shows that one of them said, it is adequately provided for. None of the participants answered that it is not adequate. Five of them said it is comprehensive. There was no uncertainty from all of them as to answer ‘Not sure’ (Table 9.3: Question 7). One of the respondents however, suggested that it is:

“Adequate, but will require some QAQC (quality assurance/quality control)” (VE-CO-4)

While quality assurance ensures that a person is doing the right things in the right way, quality control enables one to make sure that the results of what has been done are in accordance with the expectations. Thus, standards, processes and policies are recommended and improvements are implemented, while those who are expected to know about them are given the information (Free online Dictionary, 2015).

9.6.11 Feedback on Whether Further Matters of Importance Will Need to be Included or Considered in the Refined Conceptual Framework

Since knowledge has no end, it is regarded as ‘ad infinitum’. In agreement with this dictum, validation result indicates that one of the respondents said, there is something further that needs to be included in the framework. Four of the respondents expressed satisfaction with the framework, while the remaining respondent was not sure if there was any other thing to be included in the framework (Table 9.3: Question 8). The respondent who said ‘yes’ suggested:

“Total ownership and routine maintenance after commissioning” (VE-MWR-3).
The respondent who was not sure whether any other thing needs to be included in the framework made the comment by way of suggestion.

9.6.12 Feedback on Comments on What Needs to be Further Included or Considered in the Refined Conceptual Framework

Validation results indicate a nil response (Table 9.3: Question 9), however, one of the respondents made the following comment:

“The framework did not state categorically if the water scheme is community owned, such that fund generated are recycled for maintenance and reticulation” (VE-MWR-6).

9.6.13 Feedback on Opinion about the RAB Governance Techniques

Validation result shows that the governance techniques of the RAB were considered adequate by five respondents, none of them said they were not suitable, while one respondent was not sure of their suitability (Table 9.3: Question 10).

9.6.14 Feedback on Any Other Governance Technique Considered Important in the Participatory Water Governance by the RAB

Validation result indicates that one respondent commented ‘Yes’. Four respondents said ‘No’, while one respondent was not sure of any other governance technique (Table 9.3: Question 11).

The respondent who said ‘Yes’ commented thus:

“How do they evaluate this process and how often? Who evaluates this process and what mechanisms do they employ to get this done? How does this evaluation further improve system performance?” (VE-PH-5).
9.6.15 Feedback on Comments on Further Techniques for the Participatory Water Governance by the Rural Advisory Board

Validation result shows that there were no comments from any of the respondents on this question (Table 9.3: Question 12).

9.6.16: Feedback on Opinion of the Criteria Used for the Evaluation of the Rural Advisory Board in the Participatory Water Governance

Validation result indicates that, while three respondents considered that the criteria for evaluating the RAB was very suitable, two said ‘it is suitable’ none said it is not suitable. One respondent was not sure of the suitability (Table 9.3: Question 13). One of the respondent who considered the criteria used as very suitable commented by providing a proviso thus:

“However, the criteria should not be manipulated midway into implementation” (VE-MWR-3).

9.6.17 Feedback on Other Possible Criteria Not Mentioned for Evaluating the Rural Advisory Board

Validation result indicates that none of the six respondents said ‘Yes’. Four respondents responded ‘No’, while two of them were not sure of what to respond (Table 9.3: Question 14).

9.6.18: Feedback on Comments on Further Criteria for Evaluating the Rural Advisory Board

Validation result indicates a nil response (Table 9.3: Question 15. However, one of the respondents made the following comment-

“Detailed security screening by relevant government agencies” (VE-MWR-3)
9.7 SUMMARY OF THE VALIDATION EXERCISE

The six respondents who are experts in the potable water sector expressed majority views that the refined conceptual framework is valid and addressed significant important problems in the management of sustainable potable water. The refined conceptual framework is capable of assisting potable water sector in the participation of rural community stakeholders. The framework is simple to understand with minimal or no practical difficulties and that, it is clear and easy to understand. The respondents were of the opinion that the benefits of using the framework justify any human resources requirements. The description and layout of the framework was identified to be comprehensive so that, no further matters of importance are needed to be included in the framework. The RAB governing techniques were found to be suitable and that the criteria used for the evaluation of the RAB was very suitable, while no other criteria needed to be included. Further to this summary, a review of the research findings and the implications will be provided (Chapter 10.3).
Figure 9.1: Refined conceptual framework for participatory water governance
9.8 CHAPTER SUMMARY

The chapter provided the refined conceptual framework by relying on the findings of the initial inquiry based on participants’ perceptions. The constituents and their essence in the refined conceptual framework were identified in the information to that regard, while the input of the conceptual framework was also stated. The chapter subsequently discussed the techniques that may be explored for validating qualitative study. The techniques used were the researcher’s determination of saturation point, triangulation of study by multiple theories, methods and data sets. Validation was also effected by the use of thick, rich descriptions and through experts, who provided feedback on validity of findings. To successfully explore this, quantitative close-ended questionnaire was drawn up, while variables were provided for answers by the respondents, who were selected by exploring the purposive strategy and their profiles identified. The chapter stated the validation results emerging from the survey questionnaire. The analysis of the results was effected by using the thematic analysis to identify the frequencies of response. Respondents’ feedbacks were analyzed and the verbatim quote was relied upon as evidential by using the ‘set-up’, ‘quotes’ and ‘comments’ (SQC).
CHAPTER 10: CONCLUSIONS AND RECOMMENDATIONS

10.0 INTRODUCTION

This chapter is anchored on Objective-9. It identifies with the drawing of conclusions and recommendations on how the PWG framework may be effectively used to support the legal framework for potable water supply in the rural communities of Nigeria. The chapter consists of a review of the research objectives, for the purpose of distinguishing the accomplishment of the research aim. The limitations of the research are provided to clarify misconceptions about the scope. The chapter examines the general and specific implications of the research findings, which had provided answers to the research question. This is intended to provide a credible account of the import of the research in policy planning and implementation. The contributions of the study to the body of knowledge, with particular reference to theory formulation, proposition and research methodology are expressly stated. The conclusions to the study are drawn, while recommendations are directed at policy makers, corporate organisations, rural community members and the Court of Laws. The chapter advocates on issues for further researching and reflects finally, by providing a caveat to the practice of PWG for the rural community members.

10.1 RESEARCH LIMITATIONS

The major focus of this study is the PWG framework, which may be used to manage the effective supply of potable water in the rural communities of Nigeria and other African States, sharing similar traditional ethos. It may, therefore, ensure sustainability of the resource at that level. It
may however, prove difficult extending customary ethos to urban water management, unless explored in segments of the urban communities.

The study is not a research carried out by multiple researchers, nor was it funded by any other individual or agency apart from the researcher. Thus, it was carried out under stringent budgetary control. This may be regarded as a limitation on the research, which may be more beneficial if urban water supply was included to enable participatory practice in that regard. It is therefore envisaged that other researches may be focused in that direction.

The advocacy for PWG recognizes the relevance of politics, democratization and participation of rural members in the management of potable water. However, equitable gender recognition, in which the latent potentials of the female gender may be explored for environmental development may still be at the fledgling stage in Nigeria. This may be regarded as a probable limitation on the advocacy for equitability in the participatory governance.

The research is anchored on the socio-legal research methodology. This obviates any reference to propositions in the pure sciences domain. Thus, issues like the quality of water, that may be supplied to consumers may not feature in this study. However, although the study was limited by the foregoing issues, it may be regarded as pivotal for the advocacy in the implementation of the PWG, which is inclusionary and supports sustainability.

10.2 REVIEW OF RESEARCH OBJECTIVES

A review of the research objectives provides an insight into how they were actualized in the study. The aim of the study was to develop a PWG framework to support potable water supply in the rural communities of Nigeria. The framework is intended to support the current legal
framework for potable water in Nigeria. This was in response to the identified challenge of non-participation of rural community members in potable water management. Thus, the problem was stated as ‘The current Nigeria legal framework supporting the supply of potable water has not been effective, primarily due to non-participation of a broad spectrum of stakeholders—particularly the rural community members’. The question arising from the problem is ‘How can participatory water governance framework be effectively used to support the legal framework for potable water supply in the rural communities of Nigeria?’ The study, therefore, proposed that, the PWG framework may support the development of a more sustainable legal framework for potable water management in the rural communities of the country. However, it may not be feasible to achieve the stated proposal in the absence of set down objectives, which were collectively, the driving force in navigating theories to achieve the aim of the study. Thus, in achieving the aim, there was actualization of the following objectives:

**Objective 1**

To undertake a critical review of the existing literature on the sources, state and management of potable water resources in Nigeria:

The objective is addressed in Chapter 2 of the study. A review of literature revealed the various sources and significance of potable water supply in Nigeria. The review showed that the water resource is facing the twin challenges of scarcity and pollution. The anthropocentric factor, based on population explosion, urbanization, industrialization and climate change was identified as predominantly responsible for the state of potable water. Thus, the impact on key sectors of socio-economic existence was linked. The review of literature identified the institutional management for the supply of potable water.
Objective 2

To review the literature on the implementation of the current legal framework for potable water provision in Nigeria and reflect this within the concept of sustainable development:

The objective is addressed in Chapter 3 of the study. Literature review enabled the discussion of the applicable laws to potable water supply and the implications of legal dualism, in which conflict of laws may result. Identified lacuna pointed at non-effectiveness of the legal instruments. The assertion was justified by the existing gaps in management, consisting principally of un-enforceability and non-compliance in the potable water sector. Literature review pin-pointed prevalent challenges in the implementation of potable water policies, which impact on policy evaluation. Sustainable development was justified as fulcrum for the development of new policy approaches, in which public participation and the Human Rights for water may noticeably impact, while enabling sustainability of the potable water resource.

Objective 3

To Identify and review governance theory to reveal an understanding of the principles of transparency, accountability and participation (TAP), which reflect in the participatory process and Human Rights to water:

The objective is addressed in Chapter 4 of the study. Literature review revealed the dissimilarities between good governance and governmental administrative system. This is indicated in the theoretical constraints of good governance and highlighted by existing gaps in governmental system. It provided a distinction that the social, political, economic and environmental dimensions of good governance are far removed from the non-participatory occurrence in the management of water supply in Nigeria, in which the principles of TAP may not have been adequately applied. Thus, participation, even with likely constraints in the execution of the process, was adjudged a better alternative. Within it, Human Rights to water is
inextricably intertwined by linkages with roles, which may be played by different persons in its realization. A corroborative evidence of water governance is supplied in the examples of models and countries already practicing the participatory process of potable water management.

**Objective 4**

To develop a conceptual framework of participatory water governance based on the literature reviewed under Objective 1 above and the principles arising from Objective 2 and 3 above:

The objective is addressed in Chapter 5 of the study. Literature review enhanced the understanding of constraints in developing PWG and the collaboration theory, in which Donors may play crucial roles. It facilitated the ability to navigate and harness various theories, laws and regulations, customary adaptations and ethos in formulating a conceptual framework for PWG for rural communities of Nigeria. The conceptual framework consists of inter-relationships and relevant tools, enabling the governance of water supply by the RAB.

**Objective 5**

To review existing literature on research methodology and reflect this on the research design:

The objective is addressed in Chapter 6 of the study. Literature review enabled the identification of qualitative approach as a suitable methodology for the initial inquiry and the mixed methods for subsequent validation of findings. The research design was thus, focused on the various strategies and techniques, which were consistent with the qualitative approach adopted and, which allowed a logical methodological sequence to the research.
Objective 6

To collect and analyze primary data to test the workings and connectors identified by the conceptual framework, with particular attention to the participation theory and the role of third parties:

The objective is addressed in Chapter 7 of the study. The conceptual framework, (in which the research aim and question were subsumed and the theory of participation was pivotal), was subjected to inquiry, by matching it with series of field data collected from participants. Their selection was based on purposive sampling strategy and several sampling techniques, so that an unbiased result emerged, based on the thematic analysis, assisted by Nvivo 10 software in the CAQDAS package.

Objective 7

To appraise the findings emerging from the results of the primary data based on the inquiry of the participatory water governance framework referred to in Objective 4 and 6 above:

The objective is addressed in Chapter 8 of the study. The results of inquiry from the transcripts of data collected, were analyzed for research findings. By drawing on the perceptions of the participants, findings, which provided express answers to the research question, emerged.

Objective 8

To refine the conceptual framework, based on the findings referred to in Objective 7 above and to validate same:

The objective is addressed in Chapter 9 of the study. Subsequent on the research findings emerging from the results of inquiry, the conceptual framework was refined accordingly. In order to ensure reliability and validity of research, several techniques were explored for the validation exercise. The refined conceptual framework was validated by reference to
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researcher’s determination of saturation point, triangulation by multiple theories, methods and data sets. Validation was also effected by rich, thick descriptions and by use of selected experts, who were external to the initial inquiry and participated in a questionnaire survey by providing feedback of the findings.

Objective 9

To draw conclusions on the effective participatory water governance framework and make recommendations for adoptable practice to policy makers in Nigeria:

The objective is addressed in Chapter 10 of the study. The chapter reviewed the research objectives to ensure that the research aim was actualized. The implications of the findings were examined to reveal covert interpretations. The contributions to the body of knowledge were identified from the platform of contribution to theory formulation and proposition, as well as, research methodology. The recommendations are directed at a cross section of stakeholders, such as policy-makers, corporate organisations, rural community members and the Court of Laws. The chapter provides suggestions for further researches on the subject matter and a subsequent final reflection.

10.3 REVIEW OF RESEARCH FINDINGS

The findings emerged from the results of the data collected from the inquiry. They enabled the actualization of the participation theory, in which the participatory governance, involving the rural community members was the focal point for water supply sustainability.

The findings show acceptability of the conceptual framework by majority of the participants. Its usability, simplicity and functionality was further confirmed by experts, who validated the findings. Although the NGOs as donors initiate potable water supply more than every other
stakeholder, corporate organisations and government also play prominent initiatives. While the findings indicate rural community members’ relevance in decision-making, it was noted that, they may not be able to initiate water project in the absence of governmental influence and aid.

Users of potable water are also perceived as rural community members, within the context of the study. In this regard, individuals play prominent roles by serving water needs in various capacities. For example, through the instrument of politics and legislation, individuals are able to make inputs. They might also play roles in welfare services, by providing potable water to vulnerable persons in the rural community and in agricultural practices.

The RAB may be formed by electoral process and govern by exercising division of labour and provision of information. TAP in the RAB governance for PWG may ensure an effective management, while information may enable the evaluation of the RAB. It is expected that good water governance may also ensue, when there is transparency in the RAB governance, which enables the passing of information, provision of regular water supply and participation.

The CTFs have the effect of rules enforcement. Their power has impact on the collection and payment of water rates (which should be vested in selected people from the community), the regular supply of water (which should be ensured by the community members), the security of infrastructure for the supply of water (which should be carried out by the rural community members), while experts should maintain it. The payment of salaries (which may be effected by the rural community members), should also be affected by the power of enforcement of the CTFs.
Ostracism is a major community sanction method. It is expected that it may have a considerable effect of deterrence on offenders, while cultural antecedents and the implications, may be cited for veracity. The Courts protect potable water by condemning violation of rules and Human Rights infringements. This is capable of impacting on the application of ostracism as a tool for enforcement and compliance. Thus, its applicability may not be subject to abuse, since the Court, being the final arbiter, may intervene when litigations are instituted.

10.4 IMPLICATIONS OF THE RESEARCH FINDINGS IN NIGERIA

The research findings have implications for the potable water sector and policy decisions in Nigeria. The implications will be discussed from general and specific perspectives.

10.4.1 General Implications of the Research Findings

The potable water sector has been identified as a complex sector, in which inherent and anthropocentric challenges predominate. The research identified a host of them (Chapters 2.2.2, 3.2 and 4.3.7). The most prominent is the absence of participation of non-state actors, who are contextually, the rural community members. The findings are based on the perceptions of research participants. The implication of the exercise is that, it may open a new vista for the supply of water for rural community members. This is because, the findings are a collective proof of their capacity to contribute to water supply sustainability, through the participatory activities mapped out.

The collaborative influence of other stakeholders (such as donor agencies like the NGOs and corporate organisations) is a matter of great import in the potable water sector. Findings show that their inherent potentials may be tapped in the search for good water governance. Thus, it is expected that the sustainability of the sector may be assured, while the impetus brought into
the governance may likely be maintained by marshalling the participatory activities of the rural community members themselves.

10.4.2 Specific Implications of the Research Findings

Firstly, the findings expressly identified rural community members’ capacity to collaborate and govern their own water supply. Their proximal relationship to the institution for governance is expected to provide an added advantage in the exercise of their inherent and traditionally recognized participatory ethos. This factor sets the study apart as one anchored on tangible principles, within familiar environments and people enjoying proximity of inter-relationships. Secondly, from the findings, it may be understood that there is a likelihood of power shift from governmental management to that of governance system. It is therefore expected that democratization practices may be encouraged among the users of water in the rural communities, while the achievement of this is imbued with the capability to foster empowerment.

10.5 CONTRIBUTIONS TO THE BODY OF KNOWLEDGE

The contributions to knowledge will be addressed from the platforms of contribution to theory formulation and proposition and contribution to research methodology.

10.5.1 Contribution to Theory Formulation and Proposition

There have been many debates on the in-efficiency of the potable water sector in Nigeria. While some critics view this from political perspective, others have argued based on a social deprivation of a right, anchored on the Human Rights theory. Most of the literature on the subject matter is prescriptive for the involvement of a broad spectrum of collaborators for efficient water supply. This has arisen due to minimal research attention directed in Nigeria,
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towards adopting the PWG as a strategy that may be specifically designed for potable water management. Thus, there is a dearth of literature to deliberately single out a specific strategy. However, this study embarked upon exploring the participation theory to formulate the PWG framework. This was achieved by exploring the RAB, CTF, laws, regulations and policies, community norms and values and principles of TAP as strategic techniques.

Most of the literature on critique of potable water management in Nigeria, declare that the legal framework contains inherent lacuna. However, writers have not exhaustively identified the theory of participation as an ameliorating direction, canvassed and institutionalised in international forums such as the Rio Declaration (1992). This study has however, deliberately and empirically, focused upon the theory in the discovery of its anchorage, not only in international discourse, but also in the customary ethos of the rural communities of Nigeria. It is therefore expected, that the emergent conceptual framework, based on empirical research inquiry, findings and validation may provide an improvement in the legal framework supporting potable water supply. This may be applicable to other States in Nigeria, as well as other African countries with similar cultures. In this regard, participation should be located as the fulcrum for enforceability and compliance to rules supporting the supply of potable water.

10.5.2 Contribution to Research Methodology

No data collection methods have been advocated by writers and scholars to suit the problem identified in Nigeria water sector. The doctrinal approach consisting of historical, comparative and analytical strategies is the most commonly used approach in investigating a legal research problem (Chapter 1.6). However, this study deviated from the approach by adopting the socio-legal research methodology, in which the qualitative approach and the relevant strategies and techniques were explored. The adopted methodology was used to inquire into the phenomenon
of the PWG, epitomized in the conceptual framework. It is a formulation consisting of theories, principles and interwoven relationships. It is intended to support the existing framework for potable water in Nigeria and particularly designed, for the rural communities. Subsequent upon the data collection, the study used the Nvivo 10 software to enable the coding of data collected and transcribed, while the thematic analysis was used in analysing and interpreting the data. These techniques provided assurance of reliability, while validity was ensured with the process of validation, thus, obviating research bias.

10.6 CONCLUSIONS

While conclusions may only be arrived at with the proceedings of analysis, validation was the testing for plausibility and validity in this study. It is the confirmation of the research proposal. Potable water, being a complex economic goods, implicates all sectors, from which human beings may enjoy a balanced living. Importance is therefore, attached to the legal framework supporting it. Where gaps are identified, necessary mitigating impacts may, therefore, be proposed. This study discussed an emerging PWG framework for potable water supply, for the purpose of mitigating the challenge of in-effective management affecting mostly, the rural communities in Nigeria. In the vista of innovation, therefore, it is expected that the PWG may over-ride the un-democratic top-down potable water management in Nigeria rural communities. It is also envisaged that an effective management of potable water, deriving from mechanism for accountability, in which TAP should be the fulcrum for governance, may ensue.

The traditional norms and values of Nigeria rural communities have been explored to articulate enforceability and compliance to the rules proposed to govern potable water. It is expected that the community members’ familiarity with this aspect of their culture may enable respect for law and order, enhanced further by the extent of their local knowledge. It is intended that, this may
remove suspicion that the model has an alien abstracted under-pining and absolve the initiators of complicity to change the ‘status quo’ for self-determination.

Since the concept of participation demonstrates democratization of opinion and ideas, it is, expected that the PWG framework may entrench a democratic ethos in the community. While infusing a sense of self-worth in the rural members as a result of consultation, it may provide a reason for good relationships, based on collaborative activities. Information as a necessary ingredient for a relationship built on trust, is an issue regarded by the participants as crucial to the success of the RAB, which may ensure sustainability of the potable water supply dynamics.

Generally, the acceptability of the PWG framework may have inherent implications for the potable water sector in Nigeria. Thus, the emerging transformative approach has in-built capacity to change the ‘status quo’ of mono decision-making. A likely result of this is the reduction of corrupt enrichment, through inflated potable water contracts, which participatory activities may instigate. This is expected to naturally be a reflection of the capacity of the rural community members to make legitimate demands for integrity and questioning of institutional management techniques based on accountability.

As an economic good, water has the potentials of causing positive social changes. As a unifying agent, it is therefore, intended that it may provide a forum for consultation, negotiation and mutual respect for shades of opinion, rendering an attraction for investors, when effectively managed, enhancing community members’ empowerment and livelihood.

It is further expected that the PWG framework may narrow the gap in education, caused by irregular attendance of children in school, cause a reduction or eradication of infant mortality
and deaths caused by water-borne diseases. It is also expected that women’s right to privacy, eroded by the challenges in potable water supply scarcity may be restored.

Specifically, the rural community members are expected to become conversant with issues concerning the PWG, due to effective information flow. Thus, the recommendations in the study are directed at a broad flow of information. This is capable of yielding transparency, since the community members may be involved at every stage of planning, implementation and evaluation. However, like every innovation, it may take a period of gestation for apparent potentials.

The management of potable water supply in Nigeria remains predominantly vertical to be effective. However, the balance of power between the central administrative system and that of the rural potable water management system is currently, in need of a shift towards the rural communities. It is therefore, a great challenge connecting bureaucratic potable water service delivery structures to local communities. However, the environment is fertile for the replanting of respective responsibilities and accountability on the amalgam of public institutions and agencies providing controversial potable water services in policy making and implementation in Nigeria.

Localization of potable water management is capable of providing an effective arena for participatory actions. This is because, rural participation may be closely identified with the quality of service delivery, likely to increase faith and trust in public services. It is expected that this may endear those services to the public, who may, in turn be willing to pay for water as economic goods, while providing a dramatic disconnect with past ineffective methods of potable water management.
PWG may largely, assuage the gaps in potable water management in Nigeria, enabling direct involvement of the rural community members in the affairs of the resource. The sense of commitment may be sharpened, since it evolves from the collective efforts of the rural community members themselves. It is envisaged that collaborative actions of state actors with the rural community members, in a fusion of efforts, may be focused in ensuring sustainability of potable water. This may put to rest the disregard for effective supply of the resource and give the users a sense of worth. It is further expected that adopting the PWG framework may obviate distrust associated with the irregular or non-supply of potable water, so that, users and actors deal with each other in good faith.

10.6.1 Recommendations

The recommendations are directed at a broad spectrum of stakeholders for the PWG. They have the capacity to enable the success of the PWG framework.

**Recommendations for Policy-Makers:** The study has demonstrated that, although there are a myriad of reasons why it is difficult for Nigerians to access potable water, the fundamental problem lies in the ineffectiveness of the legal framework. This has an over-arching effect on the institutional management of water supply, in which there is dearth of participation of a broad spectrum of stakeholders, notably, the rural community members. Thus, the major highlight of good governance in potable water supply is decentralization, integration and co-ordinated decision-making. These are contemporary transformational trends in the sector. Markedly, stakeholders’ participation signifies a paradigm shift from centralised state coordinated systems to plurality. While reforms may usher in inclusion, it may likely result in negotiation, dialogue, partnerships, networking governance and power diffusion. However, all these may not be feasible without TAP, which policy-makers should ensure committedly. A
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paradigm shift in management towards participation should ensure corresponding success, by involving a broad spectrum of stakeholders- notably, the ‘voiceless’ rural community members. However, in effecting this, cognizance should be accorded potable water as economic goods. Thus, users should be able to pay minimally for the cost of management. This may involve a host of challenging issues- such as staff remuneration, monitoring, maintenance and replacement of infrastructure, security, evaluation and generation of profit, which may be utilized in expanding water supply. It is, therefore, necessary to establish an independent water tariff regulator at state level for the purpose of identifying and determining suitable and affordable water rates. The independence of the tariff regulator has potentials of promoting the avoidance of undue politicisation of water rates. Documented guidelines, in which the participatory governance has been adopted by the involvement of rural community users of water resource is expected to explore expertise in the setting of water rates, while the confidence and trust of the rural community users of potable water may be enhanced, since, the guidelines may protect their common interest, based on affordability. Local knowledge, cost recovery, efficiency and sustainability are other advantages envisaged in the strategy.

There is the need to improve information accessibility. Information is a powerful tool capable of affecting accountability and governance quality improvement. It may, therefore, be explored to generate the rural community members’ trust, increase their impetus for participatory actions and provide encouragement in sustaining the governance structure. Since the rural community members are altruistic on issues of public concern, information flow is necessary to sustain their interest and to enable social development.

Evaluation of programs and projects, enable policy-makers’ capacity to identify gaps and provide ameliorative measures. It is therefore, an item that should progress with planning for a
nascent project, such as the supply of potable water. It is necessary that in-depth studies are initiated to identify various evaluation techniques, suitable for this particular water supply project.

To be meaningful, PWG should foster participation by the rural community members. This is because, the overall goal of PWG is the enablement of pragmatic basis for the development of management strategies in a sustainable way. This may ensure equitability in access by local community members, while fostering long term socio-economic development in the communities. Policy-makers and the communities may, therefore, require astuteness and sagacity to recognise the intentions of powerful community members, who may seek to capture resources, meant for the rural community and entrench power dynamics, which further cause marginalisation. Thus, it is necessary that policy-makers should support rural community dialogues, so that, in the expression of their doubts and misgiving in the PWG or the RAB, community members’ fears can be allayed, through collective reasoning. In the quest of policy-makers for donor aid, it is necessary to ensure proper coordination, which should enhance and not detract from the reformative intention. Donor aid should not be directed at individual interest, but, should be regarded as a means for an effective transformation. It should thus, be available to only those who convincingly demonstrate a willingness to improve sector efficiency and sustainability. Thus, well-coordinated input by donors is a relevant responsibility for the principal agency- the FMWR in this regard.

**Recommendations for NGOs:** The UN declared that “Everyone has the right, individually and in association with others to promote and to strive for the protection and realisation of Human Rights and fundamental freedoms at the national and international levels” (UN, 1998). In cognizance of this declaration, NGOs are recognised globally for their contributions, which
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reflect not only in achievable results, but also for the optimism given to people that, they are defenders of Human Rights. They may, therefore, be referred to as tools in that regard. However, they are managed by individuals, who may be susceptible to vices antithetical to NGOs’ recognised tenets. It is therefore, pertinent that NGOs’ collective purpose should constantly be a compass in their involvement in the PWG, to obviate any sentiments to the contrary. Thus, the interest of the rural community members is paramount at every stage of the participatory governance.

Recommendations for Corporate Organisations: The recognition of the challenges in potable water, points at the attainment of cost effective energy supply, which is necessary to succeed. An extensive CSR from corporate organisations in collaborative activities, may ensure successful water supply in the neighbourhood. The actors and users of facilities should therefore, have a committed and tenacious determination to succeed in the supply of water. A major way of achieving this, is for corporate organisations to put in place a commitment policy, in which respect for Human Rights to water is embedded. The commitment policy should recognise the impact of their activities on potable water supply. This may enable corporate organisations to carry out remediation, when it is inevitably caused by their industrial activities.

Recommendations for the Rural Communities: A usual problem in Nigeria is inconsistency in policy implementation. However, as a result of participation of rural community members and a host of others, there should be checks and balance in the management, so that the onus of monitoring lies also with them to ensure sustainability of the PWG. Maintenance of infrastructure is one of the major problems in the potable water sector in developing and developed nations of the world. It is thus, regarded as critical to the
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sustainability of the PWG. Regular maintenance may ensure a continuous supply of potable water, without which the purpose of the governance may be defeated.

Governance of water should be removed from implementation without evaluation. Monitoring and evaluating activities, from the commencement of the project to implementation and gestation period are necessary. A follow up feedback from the rural community members should reflect suggestions. These should be tailored to progressively attune the water governance to contemporary developments in the water sector, capable of strengthening the participatory governance. The predominant emphasis should be on sustainability of the water governance, while researching for approaches having environmentally and financially sustainable technologies, may give the project a flavour of permanence.

Financial sustenance of the PWG for potable water supply may depend on the capacity of the rural members’ payment of water rates, which may likely affect the cost of maintenance. Thus, in the regular payment of water rates reposes their independence from reliance on financial aid from donors. Information flow consisting of workshops, seminars and local jingles are techniques, which serve as reminder and encouragement. It is therefore, important that the rural community members make particular efforts to provide support for the RAB. This may improve their functioning capacity and provide positive inspirations to meet the challenges of governance. It is also necessary that the RAB members make efforts to compare participatory activities with neighbouring communities, to identify and emulate best practices.

Recommendations for the Court of Laws: The Court, by providing justice, is the last port for the common man, who may feel denied of his rights. Thus, the provision of justice is the major way the Court encourages the protection of the potable water sector. The Court should therefore,
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ensure that the actions of the other segments of government are in accordance to the regulations concerning potable water supply. Lord Simonds, in his performance of judicial duties in *Magor and St Mellons Rural District Council v Newport Corporation*\(^\text{228}\) held that, the duty of the Court is to interpret the words. This implies that correct interpretations of laws and regulations should be provided to rule out the question of subverted justice and bias. It is also a recognised fact that Courts alone cannot do all that is needed to achieve sustainable potable water. However, they may enable the opening of opportunities to clearer governmental processes through interpretations of statutes and policies. The Courts cannot, therefore, afford the luxury of allowing the shadow overcome the substance in legal suits, when technicalities are cited as reasons for allowing injustice in the Court.

**Recommendations for further Research:** The area of confusion is the jurisdiction for matters under the Concurrent Legislative List in the 1999 Constitution, pertaining to water. The confusion stems from the nexus between land and water resources. Further researches may be needed to compartmentalise the issues arising. For a meaningful achievement of potable water management, consideration should be accorded land use planning and management. However, although the LUA has provided for the allocation and use of land in Nigeria, it is difficult for the communities to come to terms with the provision, because many of them still lay claims to traditional land ownership. Problems are envisaged in allocating land for infrastructural development of potable water in the rural communities. How this can be achieved with minimal conflict is an issue for further researching.

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\(^{228}\) *[1952] AC 189 at 191*
Women play a central role in the provision and management of water (International Conference on Water and the Environment, 1992). This is the fourth principle of the ICWE. However, twenty-four years after the provision, the potentials of women in Nigeria political terrain is still in the fringes. This reflects in the management of potable water supply, in which women’s latent potentials are relegated to the confines of domestic drudgery. The task before scholars is to research into how Nigerian female gender may be empowered for decision-making in water governance, alongside the male gender to adequately articulate their latent potentials.

10.6.2 Final Reflection

A word of caution may be offered on the question of probity and integrity, directed at the spectrum of stakeholders for the PWG. It is a reflection that-

“All too often, participation, proclaimed on the platform, becomes appropriation and privilege, when translated into action in the field. This should scarcely be surprising, except to those who, for ideological reasons or because they are simple-minded, or more commonly, from a combination of these causes, reify the ‘people’ and ‘participation’ and push them beyond the reach of empirical analysis” (Chambers, 1974).

It is possible to terminate actions tailored at appropriating collective benefits for self-embellishment. This may be ensured by the keenness of rural community members in monitoring the potable water collective benefits. However, they must also wash their hands clean and proceed to equity with clean hands.
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APPENDICES
APPENDIX 1: INTERNATIONAL TREATIES

The laws were referred to earlier in the study (Chapter 3.2.2). Notable among the numerous international Treaties pertaining to water supply are the following:


-International Convention on civil liability for oil pollution damage (Civil liability Convention) 1969.


-United Nations Conference on the Human Environment (Stockholm Conference) 1972: The Conference was the first UN's major international conference addressing environmental matters. Following the Stockholm Conference, international awareness of environmental issues increased considerably in the same way as international law-making.

-The United Nations Water Conference 1977: It was convened in Mar del Plata in Argentina. The conference is significant for first establishing the concept of basic water requirement to meet fundamental Human Rights need. The action plan declared that all peoples, whatever their stage of development or socio-economic conditions had right to access drinking water in quantity and quality equal their basic needs. The action plan was later adopted by the Agenda 21 in 1992 and UNCED confirmed it.

-The 1979 Convention on the Elimination of Discrimination against Women (CEDAW): The objective of the convention is to take all appropriate measures in eliminating discrimination against women in rural areas. This is to ensure equality of men and women. They can thus, participate and benefit from rural development. It will particularly ensure that women have the right to enjoy adequate living conditions in housing, sanitation, electricity, water supply,
transport and communications, which are critical for preventing diseases and the promotion of
good health care.

-1987 World Commission on Environment and Development (WCED): Our Common Future
crystallised and popularized the concept of sustainable development in the Brundtland
Commission report, which drew on long established lines of thoughts in the previous twenty
years. The emphasis was welcomed by developing nations and endorsed.

and their disposal: It was convened in 22 March, 1989 and was enforced in 5 May, 1992. It was
designed to reduce movements of hazardous wastes between states and prevent transfer of
hazardous wastes from developed states into less developed countries (LDCs). However, it does
not address movement of radio-active wastes. It was also intended to minimise the amount of
toxicity of wastes generated. This is to ensure sound environmental management, which will be
as close to the source of generation as possible and to assist in sound environmental
management of hazardous and other wastes, which might be generated. By May 2013, 179
states and European Union nations had become parties to the Convention229. Subsequent
arguments that the Convention did not address enough environmental dimensions resulted in
the amendment to the Convention in 1995, termed the Basel Ban Amendment to the Basel
Convention and accepted by 73 countries including the EU countries. It prohibits exportation of
hazardous wastes from developed countries (mostly members of the Organisation for Economic
Cooperation and Development) (OECD) to developing states and it includes re-cycling. The EU
has fully implemented the Basel Ban in its Waste Shipment Regulation (EWSR). This makes it a
legally binding instrument in all EU States. Norway and Switzerland have also fully implemented
the Basil Ban in their legislation.

November, 2013].
Major incidents leading to the Basel Convention were two:

(a) The Khian Sea Wastes Disposal incident, in which incineration ash from Philadelphia in the United States was partly dumped in Haiti by a ship, which was later forced away. Unable to berth with its cargo, it changed the ship’s name several times and later dumped it at sea (Walsh, 1992).

(b) In 1988, 8,000 barrels of hazardous toxic wastes in five Italian ships were dumped in Koko town in the Niger Delta region of Nigeria. This was in exchange for $100 monthly stipends paid to a Nigerian for the use of a farmland. Wastes falls under the scope of the Convention if it is listed in the category in Annex 1 of the Convention and exhibits hazardous characteristics listed in Annex 111 (Lloyd, 1992).

- Convention on the rights of the child 1989: It was explicit in its mention of water, environmental sanitation and hygiene. Article 24 (2) provides that state parties shall pursue full implementation of this right and in particular shall take appropriate measures to combat diseases and malnutrition, including within the framework of primary health care, through *inter alia*, the application of readily available technology and through the provision of adequate nutritious foods and drinking water, taking into consideration the dangers and risks of environmental pollution.

- International Conference on Oil, Pollution Preparedness, Response and Cooperation 1990: The conference recognises the need to preserve human environment generally and the marine environment in particular. It addresses the serious threat against marine environment by oil pollution incidents involving ships, off-shore units, sea ports and oil handling facilities. Emphasis is placed on the precautionary measures and prevention of oil pollution; strict application of existing international instruments dealing with marine safety and pollution prevention, such as the International Convention for Safety of Life at Sea (1974) and the International Convention for the Prevention of Pollution for Ships (1978); speedy development of enhanced standards for the design, operation and maintenance of ships carrying oil and off-shore units; prompt and
effective action in oil pollution events to minimise damage; effective preparation to combat oil pollution incidents and the importance of oil and shipping companies in such matters. It encouraged mutual international cooperation and assistance, such as exchange of information; respect for capacity of states’ response to oil pollution; oil pollution contingency plans; exchange of reports of significant incidents that may affect the marine environment. The importance of research development in combating oil pollution in the marine environment is also canvassed. The instrument is emphatic about the international principle of ‘polluter pays’ as a general international principle, ‘liability and compensation’ for oil pollution damage based on the 1969 International Convention on Civil Liability for Oil Pollution Damage (CLC), the 1971 International Convention on Establishment of International Fund for Compensation for Oil Pollution Damage (FUND) and the need for early entry into it. Bilateral and multi-lateral agreements, regional conventions and agreements as well as the UN Conventions on the laws of the sea particularly part xii was stressed, while paying attention to the special needs of developing nations.

-African Charter on Human and People’s Rights (Ratification and Enforcement) Act 2004 (Cap A9 Laws of the Federation of Nigeria): The Law is a special domestic law in Nigeria, which provides for civil, political, economic, socio-cultural and environmental development as well as people’s rights on self-determination, equality, control of the natural resources, national and international peace and security. It is an encompassing instrument. Thus, in the absence of constitutional provision on any of the themes, this international law may fill the gap.

-United Nations Conference on Environment and Development (UNCED) 1992: It is also called Rio Summit or Earth Summit. The conference themes were anchored on the Environment and Sustainable Development and consists of some principles working their way into Law such as the ‘polluter pays principle’, ‘precautionary approach’, and others (Kim-Boon, 1992) The impact of the conference on the world has been quite profound in pointing at a fresh direction for the
continuity of humankind and the biological diversity. Some 172,107 persons at the level of heads of state, 17,000 people from all works of life, and 2,400 representatives of Non-governmental organisations (NGOs) were in attendance under the secretary of the conference, Maurice Strong from Canada. The chief organiser was the UNCED. The resulting documents from the conference were:

Agenda 21; The Rio declaration on environment and development; The statement of forest principles; The UN framework convention on climate change and the UN Convention on Biological Diversity 1992 with follow-up mechanism in Commission on Sustainable Development; Inter-Agency Committee on Sustainable Development; High level Advisory Board on Sustainable Development.

The emergence of the conference twenty years after the first global environmental conference in Stockholm was decisive in building upon the Stockholm foundation in environmental matters. The UN had a focus in assisting state governments in developing a re-think on economic development and the identification of ways of stopping the destruction of irreplaceable natural resources and the pollution of planet earth. The touchstone message of the summit was the transformation of human attitude and behaviour for emerging changes. It reflected on the complexity of the various challenges facing human beings, out of which poverty and excessive consumption by affluent people, which place damaging stress on the environment were pinpointed. A recognition by governments, of the necessity of a re-direction of international and national plans and policies to ensure that economic decisions are mindful of environmental impact was canvassed. These messages have resonance globally and are yielding dividends in making economic efficiency and guiding principle for business and governments; alternative sources of energy are being researched to replace the use of fossil fuels, which has been linked to global climate change; emphasis is being placed on a new reliance of public transportation,
which will reduce vehicle emissions, city congestion and health problems caused by air pollution and smog; greater awareness of scarcity of potable water resource is now pervading.

There is consensus of opinion that the UNCED climaxed what started in 1989 December in the planning, education and negotiation among the member states, which yielded the adoption of the Agenda 21 regarded as the blueprint of actions for sustainable development, internationally viewed as the most comprehensive programme of action ever sanctioned by the international community (Strong, 1992). The Earth Summit is an influence on subsequent UN conventions, which examined relationships between Human Rights, population, social development and the need for sustainable development, women and human settlements (Strong, 1992).

International Conference on Water and Sustainable Development (Dublin Conference) 1992: It gave recommendations to reduce water scarcity through four guiding principles: (1) Freshwater is a finite and vulnerable resource essential to sustain life, development and the environment; (2) Water development and management should be based on a participatory approach involving users, planners and policy makers at all levels; (3) Women play a central part in the provision, management and safeguarding of water (4) Water has an economic value in all its competing uses and should be recognised as an economic goods. Principle 4 is instructive in the statement that it is vital to recognise the basic right of all human beings to have access to clean water and sanitation at an affordable price and that past failure to recognise the economic value of water resulted in wasteful and environmentally damaging uses of the resource. Managing water as an economic good is therefore an important way of achieving efficient and equitable use, encouraging resource, conservation and protection of water.

- 1992 Convention on the Protection and use of Trans-boundary water courses and international lakes (Water Convention): It was intended to strengthen national measures on the protection and ecologically sound management of trans-boundary surface-waters and ground-waters. States are given obligations to prevent, control and reduce water pollution from point of source and non-point sources. It provides monitoring, research and development, consultations, warning and alarm systems, mutual assistance, institutional arrangements, exchange and protection of information and public access to information. Under the convention, the Civil Liberty was adopted in Kiev in 2003, while the protocol on water and health was adopted in 1999.

- 1993 World Conference on Human Rights: It was hosted by the United Nations in Vienna and took cognisance of the rights of the people to healthy environment and right to development, which were controversial in the demands, which had in the past met with resistance from some international member states before the advent of the Rio Declaration.

- The 1994 UN Convention to combat desertification (UNCCD): It was specifically for the countries experiencing desertification and drought, particularly in Africa and the mitigation of the effects through action plans and programs, which incorporate long-term strategizing supported by international cooperation and partnerships. It stems from the Rio Conference Agenda 21 and was adopted in Paris, France in 1996. It is the only international legally binding framework set up to address the problems of desertification based on principles of participation, partnerships and decentralization, which are the hallmarks of sustainable development and good governance. 2003 was declared the international year of deserts and desertification. This has raised international debates on the effectiveness of such a declaration (Stringer, 2008).
- International Conference on Population and Development 1994: It was convened to articulate the right to adequate standard of living, adequate food, clothing, housing, water and sanitation for people and their families, affirmed by the conference.

- The 1999 Convention on the Right of the Child (CRC)\textsuperscript{231}: It provides that the states should recognise the right of the child to the enjoyment of the highest attainable standard of health; to facilities for the treatment of illness; rehabilitation of health and that state parties shall pursue full implementation of this right and take appropriate measures to combat diseases and malnutrition within the framework of primary health care through inter alia, the provision of adequate nutritious food and clean drinking water.

- The 2002 Covenant on Economic, Social and Cultural Rights (CESCR)\textsuperscript{232}: It has been adjudged as having the most detailed definition of the content of the right to water in the assessment of the implementation of the International Covenant on Economic, Social and Cultural Rights (ICESCR), which is a treaty with implicit recognition of the right to water. The committee emphasised that the Human Rights to water entitles everyone to sufficient safe, acceptable, physically accessible and affordable water for personal and domestic uses. That an adequate amount of safe water is necessary to prevent death from dehydration, reduce risk of water related diseases and provide for consumption, cooking, personal and domestic hygienic requirements\textsuperscript{233}. The release of General Comment No. 15 (2002) was a prompt for several states to agree and formally recognise the right to water to be part of their treaty obligations under the ICESCR\textsuperscript{234}.

\begin{footnotesize}
\textsuperscript{231} Article 24. Online: \url{http://www2.ohchr.org/english/law/crc.htm} Accessed 22nd September 2013.


\textsuperscript{233} Ibid.

\textsuperscript{234} Ireland’s 3\textsuperscript{rd} Period Report under ICESCR (2002) Appendix 1x 2.2. Online: \url{www.dfa.ie/.../ireland’s%20third%20periodic%20report%20to%20the%20u...} Accessed 22\textsuperscript{nd} September, 2013.
\end{footnotesize}
- Heads of state declared in Abuja (2006) to recognise peoples’ right to safe drinking water and basic sanitation, while promoting the right of their citizens to access clean and safe water, including sanitation in their respective jurisdiction\textsuperscript{235}.

- In 2007, Asian-Pacific leaders agreed in a regional declaration to accord recognition to peoples’ right to safe drinking water and basic sanitation as fundamental human right aspect of human security.

- The 2010 UN Resolutions on the Right to Water: It was a remarkable success of the persistence for the right to water. The UN General Assembly\textsuperscript{236} for the first time, gave formal recognition to the Human Rights to water and sanitation. It decided that all peoples- whatever their stage of development and socio-economic conditions have the right to access drinking water in quantities and of a quality equal to their basic needs. The UN expressed serious concern that 900 million people in the world lack access to clean water, while 1.5 million children under the age of five die each year for lack of access and 443 million school days are lost due to water related diseases. The 192-member association called for international funding, technology and other resources, to help in scaling up efforts to provide clean accessible, affordable drinking water and sanitation for all.

\textsuperscript{235} UN (2011) World Water Council. Online: www.worldwatercouncil.org/.../Right...to...Water/Human...Rights...Council...R... Accessed 22\textsuperscript{nd} September, 2013.

\textsuperscript{236} Resolution A/RES/64/292
APPENDIX 2: PRE-1988 NIGERIA ENVIRONMENTAL LAWS

The laws were referred to earlier in the study (Chapter 3.2.3). They are stated in the following paragraphs. A number of these Environmental Laws have been revised under the Laws of the Federation of Nigeria (LFN), 1990 which came into force on the 31st January 1990. They were again revised under the LFN 2004.

- Waterworks Act 1916 prohibits pollution of water resource in Nigeria by obnoxious or harmful matter.
- International Convention on the Prevention of Pollution of the Sea by Oil 1954
- Minerals Act 1958
- Criminal Code Act 1958
- Public Health Act 1958 prohibits fouling of water and vitiation of the atmosphere.
- Convention on the Continental Shelf 1958
- Act Regarding Navigation and Economic Cooperation between the States of the Niger Basin 1963
- Agreement Concerning the River Niger Commission and the Navigation and Transport on the River Niger 1964
- Convention on the Development of the Lake Chad Basin 1964
- Territorial Waters Act 1967
- Oil in Navigable Waters Act 1968 prohibits water pollution by oil spillage.
- International Convention on the Intervention on the High Seas in Case of Oil Pollution Casualties 1969
- Petroleum Act 1969
- Terminal Dues Act 1969
- Quarries Act 1969
- Sea Fisheries Act 1971
- Energy Commission Act 1976
- Land Use Act 1978
- Kainji Lake National Park Act 1979
- Associated Gas Re-Injection Act 1979
- Factories Act 1987
APPENDIX 3: POST-1988 NIGERIA ENVIRONMENTAL LAWS

The laws were referred to earlier in the study (Chapter 3.2.3). They are:

- The Harmful Wastes (Special Criminal Provisions Act) 1988: The Act was legislated in direct reaction to the Koko toxic waste dump incident. The objective is to prohibit the carrying, depositing and dumping of harmful waste on land, territorial waters and matters relating to these. The Act imposes criminal penalties\(^{237}\), civil liability\(^{238}\) on persons depositing, dumping or importing harmful waste or causing harmful waste to be deposited, dumped or imported. Such a person shall be liable for any damage resulting from these acts, except where the damage was due wholly to the fault of the person who suffered it or the damage was suffered by a person who voluntarily accepted the risk.

- Criminal Code Act Cap C38 LFN 2004: Section 245 expressly prohibits fouling of any spring, stream, well, tank, reservoir or place which renders it unfit for the purpose for which it is ordinarily used.

- National Environmental Protection (Effluent Limitation) Regulations 1991: It has provisions for the control of discharge of industrial waste and sewage into watercourses. The Act provides that every industry is required to install anti-pollution equipment for the detoxification of effluent and chemical discharges arising from the industry, using the Best Available Technology (BAT), the Best Practical Technology (BPT) or the Uniform Effluent Standard\(^{239}\) (UES). Selected waste water parameters for industries, stipulated additional sectoral effluent limitation treatment and further required treatment of effluent, which will ensure assimilation by the receiving water, into which the effluent is discharged were identified by the regulation. The breach of a provision

\(^{237}\) Section 6, 7 and 11
\(^{238}\) Section 12
\(^{239}\) Regulation 1 (1) and (2)
of the regulation is regarded as an offence, liable on conviction to penalty provided for under the FEPA Act\textsuperscript{240}.

-National Environmental Protection (Pollution Abatement in Industries and Facilities Generating Wastes) Regulations 1991: It is a subsidiary legislation. The regulation provides that industries and facilities are prohibited from the release of hazardous or toxic substances into the air, water or land of Nigeria ecosystems, beyond approved limits by the Agency\textsuperscript{241}. The regulation made provision for industries and facilities to have pollution monitoring units; a discharge monitoring report, which will be submitted to the nearest office of the Agency every month; report unusual or accidental discharges not later than twenty four hours after the discharge; have a list of chemicals used in the manufacture of its products with details of stored chemicals, storage conditions and name of any secondary buyers; have an approved contingency plan; have machinery for combating pollution hazard; have a permit storage treatment and transport of harmful toxic waste; have permissible limits of discharge into public drains; have appropriate equipment in the event they are likely to release gaseous particulate or solid untreated discharges; give due recognition to safety of workers; dispose solid wastes in an environmentally safe manner; produce environmental audits that may be demanded by the Agency\textsuperscript{242}; If there is a pollution emergency, the nearest office of the Agency will serve as the 'on-the-scene-coordinator'; each state is to designate industrial layouts and provide buffer zones between industrial layouts and residential areas\textsuperscript{243}.

-National Environmental Protection Management of Solid and Hazardous Wastes Regulations 1991:

\textsuperscript{240} Regulation 2, 3 and 4. Repealed by the NESREA Act 2007
\textsuperscript{241} Regulation 1
\textsuperscript{242} Regulations 2-21
\textsuperscript{243} Regulations 9 and 12
The regulation was enacted as a subsidiary legislation with objectives of identifying solid, toxic and extremely hazardous wastes regarded as dangerous to public health and the environment; it provides for surveillance and monitoring of wastes until detoxified and safely disposed; it provides guidelines, which are necessary in establishing a system of proper record keeping, sampling and labelling; Establishes suitable and necessary requirements to facilitate their disposal and research into possible re-use and recycling of hazardous wastes. In other to achieve these objectives, the regulation established provisions for the dangerous waste list; contingency plan and emergency procedure; record keeping in facilities; ground water protection; surface impoundments; land treatment, waste piles, landfills, incinerators and tracking programme.

-The National Guidelines and Standards for Environmental Pollution Control 1991: It provides for pollution control in watercourses as part of the environment.

-Pollution Abatement in Industries and Facilities Generating Wastes Regulations 1991: It provides for the control of industrial pollution.


-Environmental Impact Assessment Act (EIA) 1992: The major purpose of the EIA is to establish the significant effect that an activity may have on an environment before a decision is taken by any person, corporate body or un-incorporated body. The EIA statement must be a detailed one concerning the environmental impact of the proposed action. Discussions of such action must contain information about the un-avoidable adverse environmental effects, any irreversible commitment of resources necessary and available alternatives to the action. Public participation

\[244\] Regulation 1
is a major component of the EIA if it is to be regarded as successful particularly at the review and consultation stages.  

-Water Resources Act 1993: The Act vests the rights to regulate, develop and licence all water operators in Nigeria on the Federal Government, through the FMWR. This includes the following: Planning, development, usage of Nigeria water resources, quality and quantity of water distribution; Use and management of water; Application of standards and techniques for investigation, use control, protection, administration and management of water resources; Facilitation of technical assistance and rehabilitation for water supplies. The Minister for water resources is given extensive powers for water regulation such as issuance of licence, storage, pumping or use of commercial scale or construction, maintenance, operation, repairs of any borehole or hydraulic works. The Minister is given powers to define places, from which water may be taken or used; Fix time for actual anticipated shortage of water; Amount of water, which any person may take; Prohibit temporarily or permanently, the taking or use of water hazardous to health. The Minister may also revoke the right to use water, where the right over-rides public interest. The Minister is to make provision for adequate suitable supply of water for animals, irrigation, agriculture, domestic use, hydro-electric energy generation, navigation and recreation, drainage, safe disposal of sewage; Prevention from pollution, prevention from flooding, soil erosion, reclamation of land, protection of the environment. All dams in Nigeria are under the control, development, maintenance and supervision of FMWR. This includes the Kainji dam, Lake Chad dam and others.  

-The Constitution of the Federal Republic of Nigeria 1999: A detailed description of CFRN has been provided in the study, while its influence as a grundnorm may be identified in most of the Chapters’ discussions.

245 Section 7, 9 (2) and (3), 11 (1) (c) and 55.
Appendices

The NESREA Act repealed the FEPA Act in 2007. Its major objective is the provision of responsibility for the protection and development of the Nigerian environment and other related matters. The Act established eleven subsidiary legislations namely: National Environmental (Wetlands, Rivers Banks and Lake Shores) Regulations 2009, which provides for the conservation and sustainable use of wetlands and their resources in Nigeria; National Environmental (Watershed, Mountains, Hilly and Catchments Areas) Regulations 2009 with the provision that, every land owner or occupier in utilising land in a watershed, mountainous, hilly or catchment area, shall observe and respect the carrying capacity of the land and use the best available environmentally friendly technologies in minimising significant risks and damage to ecological and landscape aspects; National Environmental (Sanitation and Wastes Control) Regulations 2009. The major objective is the adoption of sustainable environmentally friendly practices in environmental sanitation and waste management to minimise pollution; National Environmental (Permitting and Licencing System) Regulations 2009 with the objective of enabling consistent application of environmental Laws, Regulations and Standards in every sector of the economy and geographical regions; National Environmental (Access to Genetic Resources and Benefits sharing) Regulations 2009. The object is to ensure the conservation, monitoring, appropriate access and benefit sharing of genetic resources; National Environmental (Mining and Processing of Coal, Ores and Industrial Minerals) Regulations 2009. The objective of the Act is to minimise pollution from the mining and processing of coal, ores and industrial minerals; National Environmental (Ozone Layer Protection) Regulations 2009. The purpose of the regulation is to regulate the use of ozone depleting substances; National Environmental (Food, Beverages and Tobacco Sector) Regulations 2009 was enacted to prevent and minimise pollution from all operations and ancillary activities of Food, Beverages and
Tobacco Companies to the Nigeria environment; National Environmental (Textile Wearing Apparel, Leather and Footwear Industry) Regulations 2009. The purpose is to prevent and minimise pollution from all operations and ancillary activities from the sector to the Nigerian environment; National Environmental (Noise Standards and Control) Regulations 2009. The objective is to ensure maintenance of a healthy environment for all people in Nigeria, their surroundings and their psychological well-being by regulating noise levels and generally to elevate the standard of living of the people; National Environmental (Chemical, Pharmaceutical, Soap and Detergent Manufacturing Industries) Regulations 2009. The purpose is the prevention and the minimising of pollution from all operations and ancillary activities from the sector in the Nigerian environment.
APPENDIX 4: INTERNATIONAL LAWS ON HUMAN RIGHTS

The laws were referred to earlier in the study (Chapter 3.2.2). They are-

- The Universal Declaration of Human Rights (1948), in which the import of Human Rights was expressed in its recognition of the right to political participation and freedom of assembly, opinion and expression.
- The 1979 Convention on the elimination of discrimination against Women (CEDAW):
  Already discussed (Appendix 1).
- The 1992 Dublin Statement on Water and Sustainable Development (ICWE): Already discussed (Appendix 1).
- 1993 World Conference on Human Rights: Already discussed (Appendix 1).
- 2002 ‘General Comment 15’ (GC15): It was delivered by an expert body assessing the implementation of the UN’s International Covenant on Economic, Social and Cultural Rights, which was a treaty recognising implicitly, the right to water. It re-affirmed the Human Rights to water, which “entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water...to prevent death from dehydration, reduce the risk of water related disease and provide for consumption, cooking, and personal domestic hygiene requirements”.
- 2010 UN Resolutions on the right to water: Already discussed (Appendix 1).
APPENDIX 5: ETHICS COMMITTEE APPROVAL LETTER

From: Louis Gare Louis2.Gare@uwe.ac.uk

Sent: 25 July 2014 2:10

To: Evelyn Aluta

Cc: Colin Booth; David Proverbs; Tom Appleby

Subject: RE: Response to your ethics application

Hi,

The Ethics Committee has now approved your application and is happy for you to proceed with your research.

Kind regards,

Louis.
APPENDIX 6: INVITATION TO PARTICIPATE IN INTERVIEW

Faculty of Environment and Technology

Department of Architecture and the Built Environment

Frenchay Campus, Coldharbour Lane, Bristol, BS16 1QY.

Dear Sir/ Madam,


My name is Evelyn Omolara Aluta. I am a PhD research student at the University of the West of England, Bristol, under the supervision of Dr Colin Booth, Professor David Proverbs and Dr Thomas Appleby. As part of my doctoral programme, I am carrying out a study into the development of participatory water governance framework. The main purpose of the research is to develop an understanding of the benefits of the participatory process in potable water management in Nigeria. The study will support the legal framework for managing the supply of water in the rural communities of Nigeria.

The study is concentrating on how the participatory water governance can be used effectively to mitigate the hardship in the management of potable water in Nigeria rural communities. You have been included among those to be interviewed based on your relationship with the supply of potable water in Nigeria. Some of the interview questions pertain to your feelings about the traditional sanction methods and use of task force in Nigeria rural communities. Other participants from similar backgrounds as yourself have also been invited to participate in the interview.
The interview will be conducted within one hour only, between the month of October and November 2014. Your anonymity is assured. Your name, date of birth, address or any other personal details of yours will not be mentioned or documented.

Should you choose to participate in the research, please, open the envelope containing the consent letter and sign it. You are allowed to withdraw your consent on or before 1st April, 2016.

Our contact details are at the bottom of this letter. If you wish to receive a copy of the results of the research, please indicate as such in the interview schedule.

Thank you for taking the time to consider this invitation. Your valuable assistance in this research is appreciated.

Yours sincerely,

Evelyn Omolara Aluta.

Doctoral Research Student.
University of the West of England, Frenchay Campus.
Coldharbour Lane, Bristol BS16 1QY.
Email: Evelyn2.Aluta@live.uwe.ac.uk
Telephone number: +2348051091771.
Dr Colin Booth: Colin.Booth@uwe.ac.uk
Telephone number: +44(0)7557586919
APPENDIX 7: INFORMED CONSENT FORM

Identity of Researcher: Evelyn Omolara Aluta (Doctoral Student)

Tel: +447404789053

Email: Evelyn2.Aluta@live.uwe.ac.uk

Title of Project: “Participatory Water Governance in Nigeria: Towards the Development of an Effective Legal Framework for Rural Communities”.

The Purpose of the Research:

The main aim of the research is to seek your opinion on the development of a participatory water governance framework for the effective management of potable water in the rural communities of Nigeria, by exploring the participatory process, which will enhance a deeper understanding of the participatory water governance development. It is expected that the development will mitigate the hardship in accessing potable water supply and create an effective management structure based on participation of stakeholders. You will be required to answer some interview questions. Participation in this research by answering the interview questions is voluntary. However, your participation in the interview is invaluable and it is estimated that the interview exercise will take no more than one hour of your time. Please, note that it will not affect you in anyway if you choose to withdraw your participation during the course of the research work.

Why you have been chosen to participate:

You have been invited to take part in this research as a result of your connection with either of the following:

- The management of potable water supply.
- The protection of the environment.
- Your advocacy for efficient potable water supply management
- Membership of rural community.
Other people numbering 54 who are connected in any of these ways are also being invited to participate in the interview.

**Harms and benefits**

There are no disadvantages to participating in the interview. It is an opportunity for you to be involved in the development of the participatory water governance framework that will enhance effective supply of potable water in the rural communities. The only risk in the exercise is that your perception may differ from that of your ministry, company, organisation or community, but you are protected because the details of participants are kept anonymous.

**Privacy, anonymity and confidentiality**

All the data collected in this research will be securely stored and destroyed after the thesis has been submitted. No information supplied will be made available for third party use. Nobody will be able to identify you or any information you have supplied from the thesis or any further publications. All responses generated from the interview will be under anonymity when presenting the findings. The data collection method adopted for the research is designed to provide complete anonymity of participants, because no personal information, data- such as name, phone number, date of birth etc. are included in the interview schedule. Furthermore, the reporting format will not link data collected to individual responses.

**Future use of information**

The findings of this research will be disseminated in academic publications such as conference presentations, peer reviewed journal and will be a part of the final thesis to be published in 2016.

**Right not to participate and withdraw**

It is up to you to decide whether or not to take part. If you do decide to take part, you will be given an information sheet to keep and be asked to sign this consent form. If you decide to take
part, you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time or a decision not to take part will not affect your progress.

**Participant declaration**

I have read and understood the attached information sheet giving details of the project.

I have had the opportunity to ask the Researcher any questions that I had about the project and my involvement in it and understand my role in the project.

My decision to consent is entirely voluntary and I understand that I am free to withdraw at any time without giving a reason.

I understand that data gathered in the project may form the basis of a report or other form of publication or presentation.

I understand that my name will not be used in any report, publication or presentation and that every effort will be made to protect my confidentiality.

Respondent/Participant name (In capital letters) ...........................................................

Respondent/Participant’ signature ....................................................................................

Date dd/mm/yyyy ..............................................................................................................

Attachment (Information sheet)
APPENDIX 8: INTERVIEW GUIDE

Faculty of Environment and Technology
University of the West of England
Frenchay Campus, Cold Harbour Lane
BS16 1QY, UK.

DOCTORAL RESEARCH INTO HOW PARTICIPATORY WATER GOVERNANCE FRAMEWORK MAY BE EFFECTIVELY USED TO SUPPORT THE LEGAL FRAMEWORK FOR POTABLE WATER SUPPLY IN THE RURAL COMMUNITIES OF NIGERIA

INTRODUCTION

The interviewer is a doctoral student at the University of the West of England. The interview serves as part of a doctoral research, which aims to inquire into the development of the participatory water governance framework, which will support the management of the potable water supply in Nigeria rural communities.

The interview is in eight sections:

Section A is a request for participants’ profile.

Section B focuses on general questions as introduction to the conceptual framework for rural community participatory water governance.

Section C is a focus on the Rural Advisory Board.

Section D focuses on the mechanism for accountability.

Section E contains the payment of water rates.

Section F contains questions on community sanctions.

Section G focuses on the courts of justice.

Section H contains the final questions.

Your contributions in answering the questions would be appreciated. All measures have been put in place to ensure strict confidentiality in using information gathered for academic purposes alone.
## INTERVIEW GUIDE

### Section A: Introduction

1. What is your current designation?
2. How long have you occupied the position?
3. What is the name of the area/ministry/agency in which you function?
4. How is your role related to potable water supply?

### Section B: General Questions

5. What are your views of this framework for community participatory water governance? (After showing the framework and explaining the sections and the relationships).
6. What is your opinion on which stakeholders should be the decision-makers in the development of the participatory water governance at the rural community level?
7. What category of stakeholders would you consider suitable to be referred to as initiator?
8. In what ways can the donors, corporate organisations and non-governmental organisations (NGOs) impact on the rural community for an effective water supply?

### Section C: The Rural Advisory Board

9. What do you think would be the best way of selecting the Rural Advisory Board?
10. What would you suggest should be the role of each of the members?
11. What do you think the Rural Advisory Board can do to ensure the sustained input of the donors, corporate organisations and NGOs?
12. What would you consider as the best way of effective management from the Rural Advisory Board?

### Section D: Mechanism for Accountability

13. Which of the stakeholders would you consider as suitable for the following task forces:
   - A. Security of infrastructure
   - B. Payment of salaries
   - C. Regular supply of water
   - D. Collection of water rates
### E. Maintenance of infrastructure

F. Monitoring

14. What would you consider as the highest effect of the community task force?

15. What in your opinion should be the measure of success of the mechanism for accountability?

16. What role do you think evaluation can play in effectiveness of the Rural Advisory Board?

### Section E: Payment of Water Rates

17. What are your views about payment of water rates by consumers?

18. What would you consider as major barriers to implementation of payment of water rates?

### Section F: Community Sanctions

19. What can you suggest as rural community sanctions?

20. Would you consider these sanction methods as having cultural backgrounds and connections?

21. In your opinion, what is the major effect of the various community sanctions when any of them is invoked?

### Section G: The Court of Justice

22. What role do you think the court of laws may play in protecting potable water supply?

23. In what circumstances would legal action be considered necessary when community sanctions are invoked?

### Section H: Final Questions

23. Is there anything else that you want to say about the discussions which I have not asked you?

24. Is there anything else that you want to ask me?

25. Would you like to receive a summary of the research findings?

End of the interview. Thank you for participating.
APPENDIX 9: THEMATIC ANALYSIS RESULTS: WORD FREQUENCY ON PERCEPTIONS OF PARTICIPATORY WATER GOVERNANCE CONCEPTUAL FRAMEWORK

The acronyms in the appendix are the participants’ anonymity used as a result of ethical consideration. They have been deciphered in foregoing chapter table (Table 6.7). Reference has been made to the data collection result analysis shown in this appendix (Chapter 7.1.1).

Major Theme (Parent Node): The Conceptual Framework for Participatory Water Governance

Sub-Theme (Child Node): Participants’ Perception of the Conceptual Framework

Interview Sources \((n = 54)\)

The most frequent perception for the conceptual framework for PWG is acceptable from fifty sources. The highest frequency by criteria from local government area is Oshimili South from nine sources. The highest frequency by criteria from category distribution/designation is rural community/grassroots member (GR) which emerged from twelve sources.

Appendix 9.1: Participants’ Perception of the Conceptual Framework

<table>
<thead>
<tr>
<th>Dependent Nodes</th>
<th>Sources</th>
<th>Oshimili</th>
<th>Uvwie</th>
<th>Warri South</th>
<th>AC/Member</th>
<th>BO/Chairman</th>
<th>The judiciary/CCJ</th>
<th>CO/Oil related company</th>
<th>CSO/Chairman</th>
<th>Rural community/GR</th>
<th>Rural community/HC</th>
<th>LGC/Member</th>
<th>M/G/Director</th>
<th>MWR/Director</th>
<th>MH/Member</th>
<th>NGO/Environmental protection member</th>
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Sub-Theme 2 (Child Node): Initiators.

Interview Sources (n = 54)

The most frequent perception for initiators is NGOs from twenty-nine sources. The highest frequency by criteria from local government area is Oshimili South from fourteen sources. The highest frequency by criteria from category distribution/designation is rural community/grassroots member (GR), which emerged from ten sources.

Appendix 9.2: Initiators

<table>
<thead>
<tr>
<th>Dependent Nodes</th>
<th>Sources</th>
<th>Community</th>
<th>Corporate Organization</th>
<th>External Donors</th>
<th>Faith Based Organizations</th>
<th>Government</th>
<th>Individuals</th>
<th>Medical Personnel</th>
<th>NGOs</th>
<th>Public-Private Partnerships</th>
<th>Schools</th>
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Major Theme (Parent Node) Stakeholders: Sub-Theme 1 (Child Node) Decision-makers.

Interview Sources \((n = 54)\)

The most frequent perception for decision-makers is *rural community* from forty-seven sources.

The highest frequency by criteria from local government area is *Warri South* from eighteen sources. The highest frequency by criteria from category distribution/designation is *rural community/ head of community (HC)*, which emerged from nine sources.

Appendix 9.3: Decision-makers

<table>
<thead>
<tr>
<th>Dependent Nodes</th>
<th>Response by Local Government</th>
<th>Response by Category distribution/designation</th>
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Appendices
Sub-Theme 3 (Child Node): Rural Community Members.

Interview Sources \((n = 54)\)

The most frequent perception for rural community members is the users of water fifty-three sources. The highest frequency by criteria from local government area is Oshimili South and Warri South emerging jointly thirty-six sources. The highest frequency by criteria from category distribution/designation is rural community/grassroots, which emerged from twelve sources.

Appendix 9.4: Rural Community Members

<table>
<thead>
<tr>
<th>Dependent Nodes</th>
<th>Sources</th>
<th>Response by Local Government</th>
<th>Response by Category distribution/designation</th>
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<tbody>
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</table>
Major Theme (Parent Node): Potable Water Provision

Sub-Theme 1 (Child Node): Donors, Corporate Organisation and Non-Governmental Organisations’ Role.

Interview Sources \( (n = 54) \)

The most frequent perception for donors, corporate organisation and NGOs role is *initiate* from twenty-two sources. The highest frequency by criteria from local government area is *Oshimili South* from ten sources. The highest frequency by criteria from category distribution/designation is *rural community/grassroots member (GR)*, which emerged from five sources.

**Appendix 9.5: Donor Agencies: Corporate Organisation and Non-Governmental Organisations’ Role**

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<th>Dependent Nodes</th>
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<th>Response by Category distribution/designation</th>
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</table>
Sub-Theme 2 (Child Node): Government’s Role.

Interview Sources (n = 54)

The most frequent perception for government’s role is *initiate water scheme* from twenty sources. The highest frequency by criteria from local government area is *Warri South* from eight sources. The highest frequency by criteria from category distribution/designation is *rural community/head of community (HC)*, which emerged from five sources.

**Appendix 9.6: Government’s Role**

<table>
<thead>
<tr>
<th>Dependent Nodes</th>
<th>Response by Local Government</th>
<th>Response by Category distribution/designation</th>
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<tbody>
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<td>Sources</td>
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<td>Initiate water scheme</td>
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<td>Maintenance of infrastructure</td>
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<td>Provision of funds</td>
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<td>Supply of water</td>
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Appendices

Sub-Theme 3 (Child Node): Individuals’ Role.

Interview Sources \((n = 54)\)

The most frequent perception for individual roles is \textit{water needs} from seventeen sources. The highest frequency by criteria from local government area is \textit{Uvwie} from seven sources. The highest frequency by criteria from category distribution/designation is \textit{rural community/grassroots member (GR)}, which emerged from ten sources.

### Appendix 9.7: Individuals’ Role

<table>
<thead>
<tr>
<th>Dependent Nodes</th>
<th>Response by Local Government</th>
<th>Response by Category distribution/designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>As an Expert</td>
<td>Sources</td>
<td>AC/Member, RO/Chairman, The judiciary/CCI, CO/Oil related company member, CSO/Chairman, Rural community/GR, Rural community/HC, LG/G/Member, ME/Director, MWR/Director, MH/Director, MO/Member, NGO/Environmental protection member</td>
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<td>As an NGO Member</td>
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449
Sub-Theme 3 (Child Node): Formation of the Rural Advisory Board.

Interview Sources \((n = 54)\)

The most frequent perception for formation of the RAB is *election* from forty-one sources. The highest frequency by criteria from local government area is *Oshimili South* from sixteen sources. The highest frequency by criteria from category distribution/designation is *rural community/grassroots member (GR)*, which emerged from nine sources.

Appendix 9.8: Formation of Rural Advisory Board for participatory water governance

<table>
<thead>
<tr>
<th>Dependent Nodes</th>
<th>Response by Local Government</th>
<th>Response by Category distribution/designation</th>
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<tbody>
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<td>Sources</td>
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Sub-Theme (Child Node): Rural Advisory Board Roles in Participatory Water Governance.

Interview Sources \((n = 54)\)

1. The most frequent perception for the roles of the RAB is \textit{division of labour} from twenty-one sources. The highest frequency by criteria from local government area is \textit{Uvwie} from nine sources. The highest frequency by criteria from category distribution/designation is \textit{rural community/head of community} (HC) which emerged from four sources.

2. Another most frequent perception for the roles of the RAB is \textit{information} from twenty-one sources also. The highest frequency by criteria from local government area is \textit{Oshimili South} from nine sources. The highest frequency by criteria from category distribution/designation is \textit{rural community/grassroots member} (GR) from six sources.

Appendix 9.9: Rural Advisory Board roles in participatory water governance

<table>
<thead>
<tr>
<th>Dependent Nodes</th>
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<th>Warri S.</th>
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<th>BO/Chairman</th>
<th>CO/Chairman</th>
<th>CSO/Chairman</th>
<th>Rural community/GR</th>
<th>Rural community/HC</th>
<th>LGC/Member</th>
<th>ME/Director</th>
<th>MWR/Director</th>
<th>MHR/Director</th>
<th>NGOE/Environmental protection member</th>
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Major Theme (Parent Node): Rural Advisory Board

Sub-Theme 1 (Child Node): Effective Management of the Rural Advisory Board.

Interview Sources (*n* = 54)

The most frequent perception for effective management of the RAB is *TAP* from twenty-eight sources. The highest frequency by criteria from local government area is *Oshimili South* from thirteen sources. The highest frequency by criteria from category distribution/designation is *rural community/grassroots member (GR)*, which emerged from six sources.

**Appendix 9.10: Effective Management of the Rural Advisory Board**

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453
Sub-Theme 2 (Child Node): Evaluation of the Rural Advisory Board.

Interview Sources \((n = 54)\)

The most frequent perception for evaluation of the RAB is *information* from twenty sources. The highest frequency by criteria from local government area is Uvwie from eleven sources. The highest frequency by criteria from category distribution/designation is *rural community/grassroots (GR)* and *rural community/head of community* which emerged jointly from eight sources.

**Appendix 9.11: Evaluation of the Rural Advisory Board in participatory water governance**

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Major Theme: (Parent Node): Good Water Governance.

Sub-Theme (Child Node): Transparency.

Interview Sources ($n = 54$).

The most frequent perception for transparency is *information* from thirty-four sources. The highest frequency by criteria from local government area is Uvwie from twelve sources. The highest frequency by criteria from category distribution/designation is *rural community/grassroots member (GR)*, which emerged from six sources.

**Appendix 9.12: Good Water Governance: Transparency in participatory water governance**

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Sub-Theme (Child Node): Accountability.

Interview Sources \((n = 54)\)

The most frequent perception for accountability is *regular supply of water* from twenty-two sources. The highest frequency by criteria from local government area is *Oshimili South* from ten sources. The highest frequency by criteria from category distribution/designation is *rural community (GR) and rural community (HC)* jointly, which emerged from twelve sources.

**Appendix 9.13: Accountability in participatory water governance**

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Sub-Theme: (Child Node): Participation.

Interview Sources \(n = 54\)

The most frequent perception for participation is *community involvement* from twenty-six sources. The highest frequency by criteria from local government area is *Oshimili South* from ten sources. The highest frequency by criteria from category distribution/designation is *rural community/head of community (HC)*, which emerged from seven sources.

**Appendix 9.14: Participation in participatory water governance**

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Major Theme (Parent Node): Community Task Force

Sub-Theme (Child Node) Effect of Community Task Force

Interview Sources \((n = 54)\)

The most frequent perception for effect of community task force is *enforcement* from twenty-two sources. The highest frequency by criteria from local government area is *Uvwie* from ten sources. The highest frequency by criteria from category distribution/designation is *rural community/head of community (HC)*, which emerged from four sources.

Appendix 9.15: Effect of Community Task Forces in Participatory Water Governance

<table>
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458
Sub-Theme 1 (Child Node): Collection of Water Rates.

Interview Sources \((n = 54)\)

The most frequent perception for collection of water rates is *selected rural people* from twenty-six sources. The highest frequency by criteria from local government area is *Warri South* from ten sources. The highest frequency by criteria from category distribution/designation is *rural community/grassroots members*, which emerged from eight sources.

**Appendix 9.16: Collection of water rates in participatory water governance**

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Sub-Theme 5 (Child Node): Regular Supply of Water.

Interview Source \((n = 54)\)

The most frequent perception for regular supply of water is the community from seventeen sources. The highest frequency by criteria from local government area is Uvwie from eight sources. The highest frequency by criteria from category distribution/designation is rural community/head of community, which emerged from six sources.

**Appendix 9.17: Regular Supply of Water**

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Sub-Theme 6 (Child Node): Security of Infrastructure.

Interview Source ($n = 54$)

The most frequent perception for security of infrastructure is rural members from fifty-two sources. The highest frequency by criteria from local government area is Oshimili South and Uvwie jointly from thirty-six sources. The highest frequency by criteria from category distribution/designation is rural community/grassroots members, which emerged from twelve sources.

Appendix 9.18: Security of infrastructure in participatory water governance

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Sub-Theme 2 (Child Node): Maintenance of Infrastructure.

Interview Source ($n = 54$)

The most frequent perception for maintenance of infrastructure is *experts* from twenty-one sources. The highest frequency by criteria from local government area is *Uvwie* from eight sources. The highest frequency by criteria from category distribution/designation is *rural community/grassroots members*, which emerged from six sources.

Appendix 9.19: Maintenance of infrastructure in participatory water governance

<table>
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Sub-Theme 3 (Child Node): Monitoring.

Interview Source \( (n = 54) \)

The most frequent perception for monitoring is community from nineteen sources. The highest frequency by criteria from local government area is Uvwie and Warri South jointly from sixteen sources. The highest frequency by criteria from category distribution/designation is rural community/head of community, which emerged from five sources.

Appendix 9.20: Monitoring in participatory water governance

<table>
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Sub-Theme 4 (Child Node): Payment of Salaries.

Interview Sources ($n = 54$)

The most frequent perception for payment of salaries is *rural community* from eighteen sources. The highest frequency by criteria from local government area is *Uvwie* and *Warri South* jointly from fourteen sources. The highest frequency by criteria from category distribution/designation is *rural community/grassroots members* and *rural community/head of community*, which emerged jointly from eight sources.

**Appendix 9.21: Payment of salaries in participatory water governance**

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Major Theme (Parent Node): Customary Norms and Values.

Sub-theme 2 (Child Node): Varieties of Community Sanctions.

Interview Sources \((n = 54)\)

The most frequent perception for varieties of community sanctions is ostracism from thirty-one sources. The highest frequency by criteria from local government area is Oshimili South from twelve sources. The highest frequency by criteria from category distribution/designation is rural community/grassroots (GR), which emerged from eight sources.

Appendix 9.22: Varieties of Community Sanctions

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Sub-Theme 1 (Child Node): Effects of Community Sanctions.

Interview Sources \((n = 54)\)

The most frequent perception for effects of community sanctions is deterrence from twenty sources. The highest frequency by criteria from local government area is Uvwie from nine sources. The highest frequency by criteria from category distribution/designation is community social organisation (CSO)/Chairman, rural community/grassroots and Ministry of Water Resources/Director (MWR), which jointly emerged from nine sources.

Appendix 9.23: Effects of Community Sanctions

<table>
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<th>Discipline</th>
<th>Enforcement</th>
<th>Isolation</th>
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Sub-theme 3 (Child Node) Community Sanctions and Cultural Implications

Interview Sources \((n = 54)\)

The most frequent perception for community sanctions and cultural implications is yes from fifty sources. The highest frequency by criteria from local government area is Oshimili South from eighteen sources. The highest frequency by criteria from category distribution/designation is rural community/grassroots (GR), which emerged from ten sources.

**Appendix 9.24: Community Sanctions and Cultural Implications**

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<th>Warri S.</th>
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Major Theme (Parent Node) Laws and Policies

Sub-Theme 1 (Child Node): Payment of Water Rates.

Interview Sources \( (n = 54) \)

The most frequent perception for payment of water rates is \textit{pay water rates} from forty-eight sources. The highest frequency by criteria from local government area is \textit{Oshimili South} from eighteen sources. The highest frequency by criteria from category distribution/designation is \textit{rural community/grassroots members}, which emerged from nine sources.

\textbf{Appendix 9.25: Payment of Water Rates}

<table>
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<th>BO/Chairman</th>
<th>The judiciary/CCI</th>
<th>CO/Oil related company member</th>
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<th>Rural community/GN</th>
<th>LGC/Member</th>
<th>ME/Director</th>
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Appendices
Sub-Theme 2 (Child Node): Major Barriers to Payment of Water Rates

Interview Sources \( (n = 54) \)

The most frequent perception for barriers to payment of water rates is poverty from nineteen sources. The highest frequency by criteria from local government area is Uvwie from seven sources. The highest frequency by criteria from category distribution/designation is rural community/head of community and Local government council/member, which emerged jointly from eight sources.

**Appendix 9.26: Major Barriers to Payment of Water Rates**

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Sub-Theme 3 (Child Node): Court of Laws’ role in participatory water governance.

Interview Sources \( n = 54 \)

1. The most frequent perception for the role of Court of Laws in potable water supply is *condemn violation of rules* from twenty-four sources. The highest frequency by criteria from local government area is Warri South from ten sources in the first instance. The highest frequency by criteria from category distribution/designation is *rural community/grassroots (GR)* from five sources.

2. Another perception is *prosecute breach of Human Rights* from twenty-four sources also. The highest frequency by criteria from local government area is Oshimili South from twelve sources. The highest frequency by criteria from category distribution/designation is *rural community/grassroots (GR)* which emerged from four sources.

**Appendix 9.27: Court of laws role in participatory water governance**

<table>
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APPENDIX 10: THEMATIC CODING FRAMEWORK IN NVIVO 10 SOFTWARE

THEMATIC CODING FRAMEWORK

- COMMUNITY TASK FORCE
  - EFFECT OF COMMUNITY TASK FORCES
  - TASK FORCES

- CUSTOMARY NORMS AND VALUES
  - COMMUNITY SANCTIONS AND CULTURAL IMPLICATIONS
  - EFFECTS OF COMMUNITY SANCTIONS
  - VARIETIES OF COMMUNITY SANCTIONS

- GOOD WATER GOVERNANCE
  - ACCOUNTABILITY
  - PARTICIPATION
  - TRANSPARENCY

- LAWS AND POLICIES
  - MAJOR BARRIERS TO PAYMENT OF WATER RATES
  - PAYMENT OF WATER RATES
  - THE ROLE OF COURTS OF LAWS

- POTABLE WATER PROVISION
  - DONORS, CORPORATE ORGANIZATIONS AND NON-GOVERNMENTAL ORGANIZATIONS
  - GOVERNMENT'S ROLE
  - INDIVIDUALS' ROLE

- RURAL ADVISORY BOARD
  - EFFECTIVE MANAGEMENT OF THE RURAL ADVISORY BOARD
  - EVALUATION OF THE RURAL ADVISORY BOARD
  - FORMATION OF RURAL ADVISORY BOARD
  - ROLES OF RURAL ADVISORY BOARD MEMBERS

- STAKEHOLDERS
  - DECISION-MAKERS
  - INITIATORS
  - RURAL COMMUNITY MEMBERS

- THE CONCEPTUAL FRAMEWORK
  - ACCEPTABLE
  - MODIFICATION IS REQUIRED
  - NOT ACCEPTABLE
### APPENDIX 11: SOURCE CLASSIFICATION WITH ATTRIBUTES IN NVIVO 10 SOFTWARE

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APPENDIX 13: COPY OF VALIDATION QUESTIONNAIRE

Dear Sir/Madam,

A QUESTIONNAIRE FOR VALIDATING THE CONCEPTUAL FRAMEWORK FOR PARTICIPATORY WATER GOVERNANCE FOR RURAL COMMUNITIES OF NIGERIA

This questionnaire aims to gather and assess experts’ opinion on the attached conceptual framework, which is intended to assist policy-makers and decision-makers, in organising a participating water governance for the rural communities in Nigeria. The framework was developed on the basis of a research to investigate how the participatory process may be effectively used to support the legal framework for potable water supply in the rural communities of Nigeria. The questionnaire is intended to validate the proposed framework with regard to its significance to the potable water sector, its practice, applicability and adequacy in addressing the management problems, which confront the stakeholders in the sector.

The questionnaire is in two sections. Section A seeks to collect information on your background. Section B solicits your opinion on general and specific aspects of the framework.

There are no correct or incorrect responses- only your opinion will be required.

Please, return the completed questionnaire to the email address provided below.

Yours faithfully,

Evelyn Omolara Aluta
Doctoral Research Student
Telephone: +447404789053
Email: Evelyn2.Aluta@live.uwe.ac.uk

Section A: Background of Participant (kindly complete the questionnaire electronically. All the boxes may be expanded).
# Background of Participant

<table>
<thead>
<tr>
<th>Name</th>
<th>Profession</th>
<th>Qualification</th>
<th>Current job designation</th>
<th>Years of experience in your designation</th>
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</thead>
</table>

## Section B: General impression on the framework (Please, tick ‘X’ as appropriate)

Please, familiarise yourself with the framework provided and answer the following question on that basis.

1. Does the framework address important problems in the management of sustainable potable water supply?
   - Yes, quite significant
   - Yes, but not significant
   - No, it would make no difference
   - Not sure of its significance

   Comments if any:

2. Would you say the framework is capable of assisting the potable water sector in the participation of stakeholders in the rural community?
   - Yes, it is capable
   - No, it is not capable
   - Not sure if it is capable

   Comments if any:

3. Would you say the framework is simple to understand and use with little or no practical difficulties?
### 4. Would you say the framework is clear and easy to understand with little or no practical difficulties?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comments if any:</td>
<td></td>
</tr>
</tbody>
</table>

### 5. If you answered ‘No’ in Q3/Q4, please, provide comments in specific aspects of the framework which in your view, are likely to cause major difficulties in its use

| Comments if any:                                                     |

### 6. What is your opinion of human resources needed, to apply the framework in real life selection exercise?

<table>
<thead>
<tr>
<th>It would be too cumbersome to operate</th>
<th>It would not be too cumbersome to operate</th>
<th>The benefits of using the framework justify any human resource requirements</th>
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<tbody>
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<td>Comments if any:</td>
<td>Comments if any:</td>
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</table>

### 7. What is your opinion of the description of the framework and its lay out?

<table>
<thead>
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<th>It is adequate</th>
<th>It is not adequate</th>
<th>It is comprehensive</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comments if any:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 8. In your opinion, is there any further matter of importance which ought to be included or considered in the framework?
### 9. If ‘Yes’ to Q8, please, specify in the comment box

Comments if any:

### 10. What is your opinion of the RAB governance techniques?

- They are suitable
- They are not suitable
- I am not sure of their suitability

Comments if any:

### 11. Are there any other governance technique which you consider important in the participatory water governance by the RAB?

- Yes
- No
- Not sure

Comment if any:

### 12. If you answered ‘Yes’ to Q11, please, specify in the box

Comment if any:

### 13. What is your opinion of the criteria used for the evaluation of the RAB in the participatory water governance?

- It is very suitable
- It is suitable
- It is not suitable
- I am not sure of the suitability
### Comments if any:

<table>
<thead>
<tr>
<th>14. In your opinion, are there any other criteria for evaluating the RAB that have not been mentioned?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
</tr>
<tr>
<td><strong>No</strong></td>
</tr>
<tr>
<td><strong>Not sure</strong></td>
</tr>
</tbody>
</table>

15. If you answered ‘Yes’ in Q14, please, list the criteria that ought to have been considered in the box.

Comments if any:

---

End of questionnaire.

Thank you for participating.

N.B: Confidentiality and anonymity are guaranteed. All information collected will conform to the University of the West of England human research ethical procedure.

Please, return the completed questionnaire to Evelyn2.Aluta@live.uwe.ac.uk
APPENDIX 14: COPYRIGHT APPROVALS

Appendix 14.1: Approval on the use of map of Nigeria (Table 2.1)

Free approval has been provided in the internet thus-

“Nations Online Project: Administrative Map of Nigeria. You are free to use this map for educational purposes”.

Appendix 14.2: Approval on the use of contents in Table 5.1

Christopher ANSELL <cansell@berkeley.edu>

|Sat 16:16

Hello Evelyn,

I’m cc’ing my co-author, Alison.

I’m certainly OK with you citing the material. But when you say "adapt" the material, I’m less clear about what you mean? Do you mean change the wording?

Best,

Chris
Appendix 14.3: Approval on the use of map of Delta State of Nigeria

May, 2016

Dear Evelyn Aluta,

Your request to cite the map of Delta State created by this office has been granted.

Regards,

[Signature]

Martins Oyaye.