Strategic Interests in Transboundary River Cooperation in Southern Africa – the Case of the Okavango River

by
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Declaration

By submitting this thesis/dissertation electronically, I declare that the entirety of the work contained therein is my own, original work, and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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Abstract

Water is life. Its availability and quality directly relates to what is possible in agriculture as well as human health. In Southern Africa, water issues have become an important political agenda as a result of the droughts that the region has been experiencing. The Southern Africa Development Community (SADC), in its water protocol advises its member states to set up river basin organisations to manage transboundary rivers in Southern Africa. The aim is to encourage the sustainable use of international rivers.

Sharing international rivers has proven to be a very difficult issue as shown by the voting patterns on the UN Convention on the Law of Non Navigational Uses of Transboundary Rivers and the subsequent failure of entry into force of this convention. While strategic interests on the global levels manifest themselves in voting patterns in forums like the UN Assembly, the situation is trickier at the regional level. These strategic interests are ever present as a result of states' need for recognition of their sovereignty and the inability of states to accept any hierarchical enforcement.

This study investigates the impact of these interests at the basin level on the structure of cooperation. With the use of a case study, namely the Okavango River Basin Commission, and guided by regime theory, the study looks at the process of regime formation and maintenance in the basin. It concludes that states use cooperative arrangements (international water cooperation regimes) as tools for the strategic protection of their sovereignty.

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Opsomming

Water is lewe. Die beskikbaarheid en kwaliteit het direk te betrekking op wat moontlik toeneemed is in landbou so wel as menslike gesondheid. Water as ’n noodsaaklike bron in suider-Afrika word meer en meer beskou as ’n belangrike kwessie op die politieke agenda as gevolg van droogte wat in die streek ondervind word. ’n Hoë vlak van belangrikheid word aan die bestuur van water binne die streek geheg. Die SAOG (Die Suider – Afrikaanse Ontwikkelings gemeenskap), het in sy water protokol aan sy lid state beveel om rivier kom organisasies te stig om beheer uit te oefen oor riviere in Suider-Afrika wat oor grense heen vloei. Die doel is om lidstate aan te moedig om die volhoubare gebruik van internasionale riviere te bevorder .

Die vedeling van internasionale riviere is ‘n komplekse kwessie soos wat VN stempatrone aandui ten opsigte van die Wet op die Verbod teen Navigasie op Oorgrensende Riviere en die daaropvolgende versuim van die inwerkingtreding van die Konvensie aandui. As gevolg van state se behoefte vir erkenning van hul soewereiniteit en hul strategiese belange bly die deel van rivierkomme ‘n moeilike internasionale probleem.

Hierdie studie ondersoek die impak van die bogenoemde belange op die kom vlak op die struktuur van samewerking. Met die gebruik van ’n gevallestudie, naamlik die Okovango Rivier Kom Kommissie, en aan die hand van regime teorie, ondersoek die studie die proses van regime formasie asook die problematiek rondom die instandhouding van die Komissie. Die gevolgtrekking is dat state koöperatiewe reëlings (internasionale water samewerking regimes) as instrumente vir die beskerming van hul strategiese soewereiniteit en eie belange gebruik.

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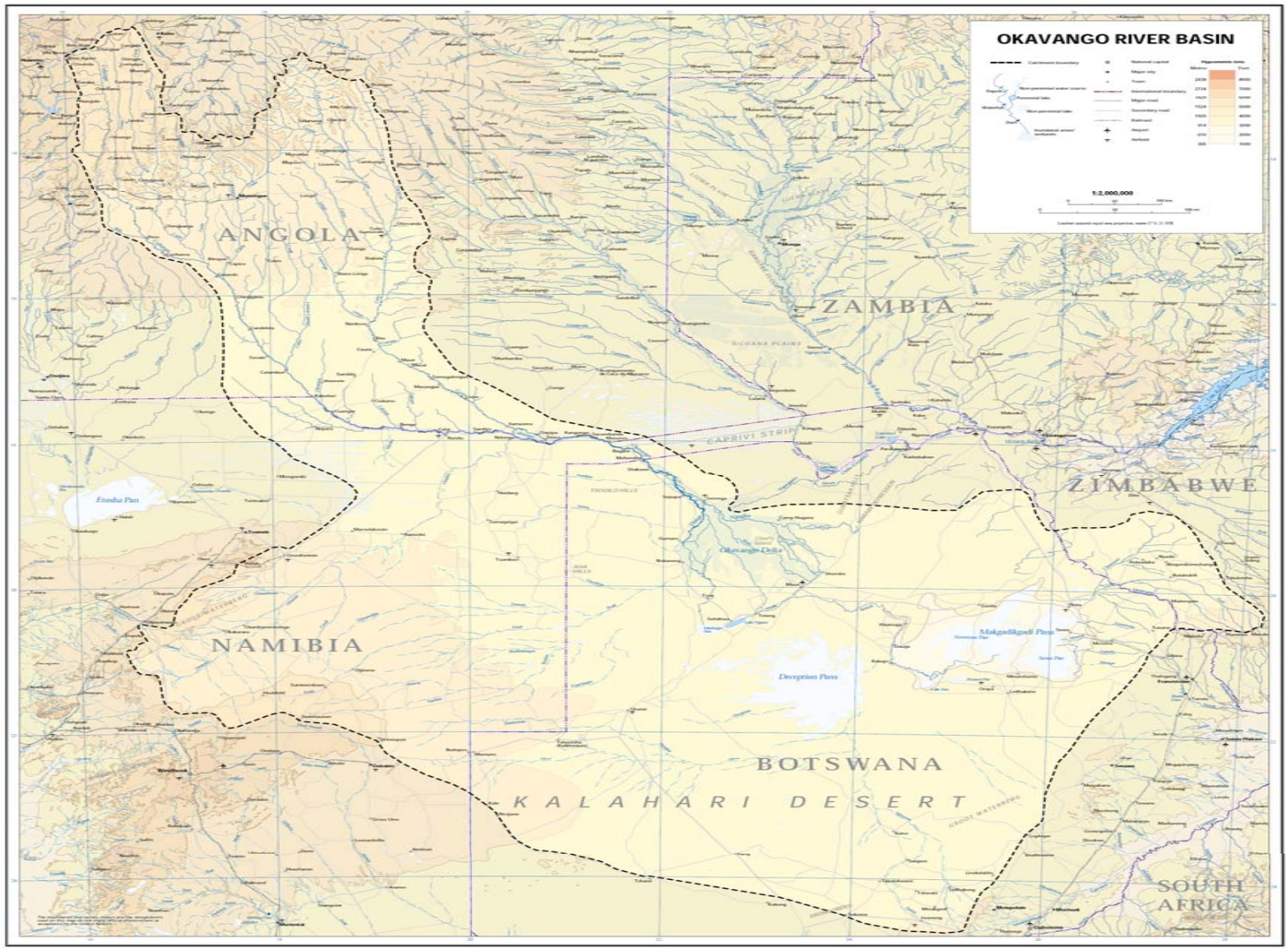
List of Abbreviations

350 MW	350 Mega Watts
AWIRU	African Water Issues Research Unit
BMZ	German Federal Ministry for Economic and Development Cooperation
DWA	Department of Water (Namibia)
ENWC	Eastern National Water Carrier (Namibia)
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GR	Growth Rate
GTZ	German Development Cooperation
Ha	Hectares
HOORC	Harry Oppenheimer Okavango Research Centre
ICJ	International Court of Justice
IDPs	Internally Displaced Persons
IRBM	Integrated River Basin Management
IRN	International Rivers Network
IUCN	International Union for the Conservation of Nature
IWRB	International Waterfowl and Wetlands Research Bureau
JPWC	Joint Permanent Water Commission
LBPTC	Limpopo Basin Permanent Technical Commission
MPLA	Popular Movement for the Liberation of Angola
MW	Mega Watt
NDP	National Development Plan (Botswana)
NGO	Non-Governmental Organisation
NSO	National Statistics Office (Malawi)
OBSC	Okavango Basin Steering Committee
ODMP	Okavango Delta Management Plan
OKACOM	Okavango River Basin Commission
PJTC	Permanent Joint Technical Commission
RBO	River Basin Organisation
RT	Regime Theory
SADC	Southern Africa Development Community
SADCC	Southern Africa Development Coordination conference
SIDA	Swedish International Development Agency
TDA	Transboundary Diagnostic Analysis
UN	United Nations
UNESCO	United Nations Education, Scientific and Cultural Organisation
UNFCCC	United Nations Framework Convention on Climate Change
UNITA	National Union for the Total Independence of Angola
USAID	United States Aid for International Development
UXOs	Unexploded Ordinances
WFP	World Food Programme
WWF	World Wide Fund for Nature
IBT	Inter Basin Transfer

Figure 1: Map of the Okavango River Basin



Map of the Okavango River Basin: ©UN Cartographic Section

CHAPTER ONE: INTRODUCTION

1.1 Introduction and Background to the Study

Water is life. Trivial as this statement may sound, it emphasises the importance of water in human societies and in sustaining human life itself. For the majority of the world's poor who have to depend on agriculture, a good supply of water, either through irrigation or rainfall, makes a difference between life and death. With adequate water, one is able to farm, produce food and use the surplus for sale. Produce from agriculture helps to pay for education, health care and other essential services. Adequate quality water means the difference between children or indeed the general population catching waterborne diseases or leading a healthy life and reducing health expenditures. In this way, water becomes inextricably linked to poverty (Kulindwa and Lein, 2008). The inability to harness water properly, compounded by drought and bad government policies, have led to huge food security problems, affecting the livelihoods of hundreds of millions of people in the past. The Ethiopian famine of 1985 comes to mind.

On the global level, a world water crisis is said to be the largest public health concern with nearly 20% of the world population without access to safe drinking water. This lack of access is directly linked to the deaths of 4 500 children per day (Ethos Water, 2009). At this level as well, demographics are the most important source of pressure on water. A growth in the world population of up to 80 million people a year means an annual increase of fresh water demand of up to 64 billion cubic meters (UN World Water Development Report 3, 2009). A world fresh water crisis is closely linked to a world food crisis with this link becoming more important in the context of climate change (Environmental News Service, 2008).

Southern Africa has experienced its share of food security problems triggered by droughts from around the early 1980s to the 1990s and the first few years of the 21st century. These food security emergencies saw hundreds of thousands of people relying on food aid. This was a failure of governments to feed their own people. This is the same time that Africa witnessed the appearance and upsurge of HIV and AIDS on the continent. This meant that the problem of water scarcity and HIV and AIDS further reduced the capabilities of the poor households to effectively get out of poverty. Tackling poverty became increasingly complicated.

The events described above roughly coincided with the second wave of democratisation on the African continent. African leaders began to include water as a political agenda, especially in the Southern African Development Community (SADC) (Turton, 2005:9). This saw fresh water

resources taking a general movement like other natural resources, into the discourse of securitisation. *Securitisation* is the positioning of resources as existential threats such that they gain salience within particular political settings (Turton, 2003). Notwithstanding the above analysis, the southern part of the SADC region comprising South Africa, Namibia, Botswana, Lesotho, and Swaziland is much drier compared to the northern part. For this part of the region, and indeed a wider world experiencing water shortages, the resulting shift into the security discourse has since changed the way national security threats are assessed. Some of the issues, for example, that have become matters of national security include issues ranging from food to the environment. It is within this background that the management of transboundary rivers has gained salience over the past decades. High ranking officials like the former UN Secretary General, Boutros Boutros Gali, have predicted a shift from the "conventional" resources connected to conflict to what they have called "water wars" (Wolf, quoted in Alam, 2002:347). The water wars thesis states that water scarcity leads to conflict; however, this has been refuted by scholars like Turton (2000), Ashton (2000) and Alam (2002) arguing that water tends to result in cooperation rather than conflict. In the context of SADC, this has also largely been the case as cooperation is being pursued as a larger objective of the grouping. To this extent, SADC could be viewed as a security community within the context of the *democratic peace theory*, which will be reviewed later in chapter two.

International cooperation is an important part of the current liberal world order. In a fast globalizing world, very few things would be possible without international cooperation. For example, travel and communication would be impossible without international cooperation. States need to agree on cooperation mechanisms in order to have all these systems operating smoothly. These systems have been called regimes in International Relations. Most of these regimes bring benefits such that they appear overwhelmingly positive (Little, 2008:298). This definitely applies to the world postal regime and air travel regime. As a result of the successes registered in areas such as telecommunications and travel, regime formation to manage international cooperation has become fashionable. It has therefore been extended to several other areas including the environment and its natural resources. An example of a regime formed to manage the environment is the Kyoto protocol designed to reduce green house gases in order to tackle climate change. Spurred by the importance of water to national economic development and poverty alleviation, international rivers are increasingly being managed using regimes. The Mekong and Indus Rivers are examples in point. Transboundary rivers fall within the framework of the 1997 UN Convention on the Law of Non Navigational Uses of International Water Courses (United Nations, 1997). At the regional level, SADC has actively promoted the establishment of River

Basin Organisations (RBOs) as a way of managing the utilisation of transboundary rivers. This falls within the 1995 SADC Water protocol revised in 2000 to include provisions of the 1997 UN convention cited above. For detailed information about global, continental and regional water instruments, refer to appendix C on page 64.

The purpose of this study is to understand how strategic considerations like sovereignty affect the structure of institutions emanating from cooperation regimes. It will, specifically, focus on water cooperation. To this end, the Okavango River Basin Commission (OKACOM) will be used as a case study. The Okavango River flows through three countries, namely Angola, Namibia and Botswana. In 1994, the three countries established the permanent Okavango River Basin Commission (OKACOM). The objective of the Commission was to act as a technical advisor to the three governments with regard to conservation, development, and utilization of water resources found in the Okavango basin (de Wet *et al.*, 2008:45).

1.2 Problem Statement

Transboundary rivers, as is apparent from the nomenclature, are rivers that have crossed one or more international boundaries. Their management therefore requires collaboration between two or more countries. The reality is that the world is and will remain organised politically into sovereign territorial states for the foreseeable future, while at the same time the need for interconnectedness is ever more important in order to facilitate economic and social integration (Lawrence, 1996: xiv). According to Ruggie (1998:47) "the international state system, in principle, has been a decentralized one: states are subject to no external earthly authority". States therefore are under no obligation to cooperate, however, in certain instances, they choose to do so. An example of an economic integration project in transboundary rivers is the co-management of river resources exemplified by an organization like the Okavango River Basin Commission. The political reality however poses a problem as it entails that sovereignty has to be maintained at all times whereas the problem needing cooperation requires that a little of this sovereignty be given away to a collective decision making body.

Inevitably, cooperation involves compromise (Nel *et al.*, 2001). In any kind of agreement - with the exception of a situation where parties to the agreement agree on everything - sacrifices have to be made in order for a consensus to be reached. As mentioned above, many studies have shown that rather than bringing conflict, international water cooperation breeds peace (Turton, 2002; Alam, 2002). How do states' interests (including sovereignty concerns) affect the prospects for cooperation in relation to the Okavango River Basin Commission?

1.3 Rationale

The establishment of regimes like the Okavango River Basin Commission has been used by SADC as a basis for cooperation in transboundary rivers. The SADC Water Protocol urges all states to come up with such bodies to manage transboundary rivers. While so much has been written about transboundary cooperation in Southern Africa (see Turton and Ashton: 2002), an equal amount of effort has not been put into studying the nature of the regimes that emerge. This is an opportune time to take a step towards this direction given claims of climate change and its adverse effects on the environment. As a result of this, water issues are going to be critical in the near future. Regimes formulated to deal with these issues have to be ready to tackle these issues if and when they do arise. This study therefore aims to contribute to a better understanding of the regimes that are emerging and comprehend their evolution.

Turton *et al.* (2003) suggest that the transboundary water configuration in Southern Africa indicates the presence of a hydropolitical complex where economically advanced and relatively dry countries are sharing international rivers with less developed countries. This theory is based on Buzan's theory of a security complex (Buzan, 1991; Buzan *et al*., 1998 and Schulz, 1995 cited in Turton *et al*., 2003). This discussion will be covered in more detail in chapter two under a section 2.4. If a hydropolitical complex does exist, this has important implications for institutions that emerge.

Lastly, this study is important as millions of people depend on international rivers. In the Okavango delta, thousands of households in Ngamiland District of Botswana and thousands others from the Namibian side rely on the Okavango River for agricultural production and other livelihoods. What happens on the international level on the use of these rivers will affect human security in the region.

1.4 Objectives of the Study

The general objective of the study is to understand how compromises and considerations about sovereignty and access to water affect cooperation in the emerging transboundary water management architecture in Southern Africa. In other words, how is the regime, which results out of the cooperation of two or more international governmental parties, affected by the compromises and sovereign considerations? The study will, therefore, explore how strategic considerations relating to national interest and sovereignty have impacted on cooperation in the Okavango River Basin.

1.5 Research Hypothesis

The study has two working hypotheses. The first is that ***states use regimes to enhance their positions vis-à-vis other states***. The second hypothesis advanced is that ***states rationally design international agreements to protect themselves in addition to advancing their interests.*** These hypotheses come from the understanding that states play an important role in the formation of regimes. Once these regimes have been established and are operational like the different water commissions, including the case of the Okavango, they become legitimate international actors on their own accord. States party to the regime are, by virtue of being signatories, mandated to comply with the issues that come out of the regime or risk defection. Therefore, to protect themselves from unforeseeable circumstances and to protect their own sovereignty, countries will deliberately build in "weaknesses" or "loopholes" at the design stage of the regime.

1.6 Methodology

The study will utilize a qualitative methodology specifically using a case study approach. The case chosen is the Okavango River Basin Commission (OKACOM). The OKACOM is one of the many river basin organizations that have emerged with the backing of SADC. The case study will involve a detailed analysis of the activities of the three cooperating states focusing on the process of regime formation. Using regime theory, the processes and workings of the resulting regime will be critically appraised. This appraisal will intend to identify design weaknesses and loopholes that can confirm or reject the hypothesis raised in this study.

Qualitative methodology has three important tenets - it aims to describe, understand and provide explanations to observed behaviour or changes (Tellis, 1997). The case study approach is useful for this undertaking as it fulfils all the three tenets of qualitative research. Several critiques of the case study approach have been advanced. First, it has been criticised for its incapability to reach generalised conclusions, hence lack of rigor (Levine, 1996:352). In response to this criticism, proponents of the methodology argue that theoretical generalisations, rather than population generalisations, are intended in case study research (Tellis, 1997), and that these theoretical generalisations are possible. Secondly a critique of the methodology as used in this study would be that a comparative study between two existing institutional forms would have yielded more insights. While this may be true, there does not exist a pure institutional form or an ideal type except in theoretical construction. In addition to this, these other institutional forms might be plagued by the same institutional design problems hypothesized here. This means that they may not be able to provide any useful information for the study.

1.7 Limitations of the Study

The study has three limitations. The first relates to the generalisability of the case study. While important lessons can be learned from studying cooperation in the Okavango River Basin, the configuration of relationships among the three case study countries is a unique one affected by among other factors the history as well as geopolitical realities in which these countries find themselves. No two river basin organisations can have identical relational configuration. While this a limitation on the case study selected, it is not a limitation per se on the study results as the main objective is to make general theoretical conclusions as argued by Tellis (1997). The second limitation relates to the theoretical framework choice i.e. regime theory. Regimes are generally agreements made between governments. This makes the discussion in the thesis state centric. Notwithstanding this, the influence of non state actors will to a limited extent be discussed. Lastly, resources available for conducting this study are a third limitation. The design of the study reflected the resources available. In a better resourced situation, a more elaborate design would have benefited the study leading to a richer and more detailed understanding of problem.

1.8 Outline of Chapters

The study consists of four chapters. The second chapter begins with a theoretical discussion on cooperation. After the discussion of the theoretical perspectives, the chapter will also review the literature available, with the aim of positioning this study in a wider discussion on international water cooperation and the impact of politics on international water regimes.

Chapter three will be a discussion of the case study. The case study will be a detailed review of the process of the development of a water management regime in the Okavango River Basin. This chapter will look at the actors, the factors and main issues involved. After this discussion, chapter four will conclude the study with some lessons learned and suggestions for further research.

CHAPTER TWO: THE PROBLEM OF COOPERATION

2.1 Introduction

Chapter one has introduced the subject under discussion - regime formation as a vehicle of cooperation. This chapter will review the relevant literature on the subject. The chapter will start by reviewing the theory dealing with international cooperation. Regime theory is the guiding theoretical framework for the study. Regimes in some cases, especially the case selected for this study, have resulted in the formation of international organizations. In order to properly get acquainted with the functionality of international organisations, this chapter will also review work on multilateralism before going on to review literature specifically dealing with institutional formation processes. It will show the gap existing in literature as far as understanding state preferences for actions in cooperative arrangements is concerned. However, before we delve into that, a discussion of regime theory is in order.

2.2 Cooperation in the International System and Regime Theory

2.2.1 Cooperation in the International System

The problem of cooperation in the international system has been the subject of much debate, mainly but not exclusively, in two dominant traditions in International Relations. These traditions are Realism and Liberalism. Specifically, this thesis will discuss the debate between neorealism and Liberalism. Those with a neorealist persuasion have made four assumptions about the state. The first assumption is that the state exists in a condition of *anarchy*. It is anarchic as there is no overarching world government to police the activities of individual states as opposed to the situation within the nation states where the state apparatus has the monopoly over the use of violence (Dunne & Schmidt, 2008:92). Anarchy is used in this sense as an ordering principle as opposed to a chaotic and conflictual situation (Mearsheimer, 1995:10). The monopoly that states have, constrains the activities of individuals within the state, whereas on the international level, there are no such controls. The second assumption is that states have the *capacity to wage war* and they accumulate military hardware, software and prowess to maintain this capacity. Thirdly, since competition characterizes this anarchic configuration, states cannot easily *trust* other states (Mearsheimer, 1995:10). For a neorealist, therefore, *survival* in such a situation is all about self interest and cut-throat competition. Any chance for one state to annihilate another state will be taken. Survival as motivation is the fourth assumption that neorealists make. When it comes to cooperation, neorealists contend that, while it is possible for states to cooperate, it is an exception

rather than the rule. States will cooperate only if two conditions will be satisfied. First, that they will *benefit* from cooperation relative to others, and secondly that there is *no cheating* (Mearsheimer, 1995:12). However, because states do not trust each other, cooperation is extremely difficult to achieve.

On the other side of the debate, liberalists are much more optimistic about the outcome of the interaction between states. Liberalism has been built on the foundation of individual liberty and equality, which are the determinants of peace (Dunne, 2008:111). While liberalists accept the need and importance of the state, they however say that states should not interfere in the activities of individuals that live within them. From this logic comes economic liberalism and democracy as a form of governance. Within the security realm, the democratic peace theory has been the most prominent. This theory originates from Kant's perpetual peace theory written in 1795[1] (Kant, 1795). The theory has been and is still being debated in academic circles. Ostrowoski (2002) Rosato, (2003) and Zinnes (2004) are some of the recent contributors to the debate. In its basic representation, the democratic peace theory contends that democracies do not go to war with each other because of factors that can be either classified as normative or institutional (some use structural instead of institutional) (Zinnes, 2004:431 and Rosato, 2003:586-587). These norms and institutions are a distinctive feature of democracies and they act as constraints to conflict as they have conflict resolution mechanisms inherent in them.

Liberalists view peace and cooperation among states as the norm and object to war as an anomaly in society. They contend that war can be remedied by commerce and collective security (Dunne, 2008:111). Earlier economic liberalists have argued that in the act of engagement in trade with other individuals and states, a common interest area is established around trade, which in turn promotes peace and cooperation. This is so because if the states were to engage in war, both would lose economically.[2] In reaction to this and in a bid to advance our understanding of cooperation between states, Keohane (1989), a neoliberal institutionalist[3], argues that

> an open international economic environment, characterized by opportunities for mutually rewarding exchange under orderly sets of rules provides incentives for peaceful behaviour, but not that it necessitates and ensures such behaviour. That is cooperation must be distinguished from harmony. Cooperation is not automatic, but requires planning and negotiation.

[1] It is important to remember that Kant discusses a "republic", which we equate to prevailing "liberal democracies" (see Adem, 2007 online at: http://www.allacademic.com//meta/p_mla_apa_research_citation/1/8/0/2/9/pages180293/p180293-1.php)

[2] Keohane (1989) argues that this is a naïve conception. Sometimes referred to as the "harmony of interests" this formation has been well criticized by E.H. Carr – Keohane (1989:11).

[3] Keohane does not seem to accept the label of "neoliberal" but readily accepts "neoliberal institutionalist" (Keohane, 1989:16 – note #1). Mearsheimer, however, refers to him as a 'liberal institutionalist".

Keohane's argument sets him apart from the classical liberal thinkers. He neither accepts the simplistic formulation of cooperation as conceived by classical liberal thinkers, nor does he reject the fact that cooperation is possible. He asserts that it is not automatic. Neorealists agree too that cooperation is not automatic. The theoretical formulation that best represents this convergence is regime theory (Little, 2008:298).

2.2.2 Regime Theory

The basic argument is that international regimes help facilitate cooperation in the international system. The common assumptions accepted by both according to Little (2008:98) are:

a) States operate in an anarchic international system

b) States are rational and unitary actors

c) States are the units responsible for establishing regimes

d) Regimes are established on the basis of cooperation in the international system

e) Regimes promote international order.

According to Keohane (1989:7), "[l]ike neorealists, neoliberal institutionalists seek to explain behavioural regularities by examining the nature of the decentralized international system". Both neoliberal institutionalists and neorealists believe that there are parts of the international system that cannot be completely understood as a result, they work within what is known while employing assumptions for what is not known. As such "[n]either perspective is committed to the naïve notion that reality can be objectively known" (Keohane, 1989:8). Secondly, the centrality of the state has been one of the contentious assumptions in other formulations. However, in this particular theoretical endeavour, the state's position has been accepted by both neorealist and neoliberal institutionalists. Keohane and Nye (1972) agree that "states have been and remain the most important actors in world affairs" (cited in Keohane, 1989:1). In a change of conviction, Keohane (1989:8) confesses that subsequent research persuaded him that non-state actors continue to be subordinate to states. Thirdly, neoliberal institutionalists are in agreement with neorealists that in understanding the structure of the international system, we gain knowledge of "a small number of big and important things…to the extent that dynamics of a system limit the freedom of its units, their behaviour and the outcomes of their behaviour becomes predictable" (Waltz, 1979 cited in Keohane, 1989:8). However, due to the fact that international political reality can only be partially understood (Keohane, 1989:8), the

predictability referred to by Waltz above is not perfect predictability. This becomes even more complicated in the African situation considering that most of the theorising has been dominated by western scholars and state complexes such that in circumstances where the African state has been labelled as 'weak' and 'contested', endeavours at studying patterns of action among states is ever more an elusive exercise to engage in.

While neorealists and neoliberal institutionalists agree on these issues, there are some important differences as well. The neorealist definition of structure is found wanting by neoliberal institutionalists. As a result of the narrow and confining conception, neorealists can only explain changes that come as a result of shifts in relative state capabilities, which are thought of as economic resources and state productivity on the one hand and military strength on the other (Keohane, 1989:8). Indeed "[u]nless the positions of units change relative to one another, the neorealist cannot explain changes in their behaviour" (Keohane, 1989:8). What the neorealist forgets from the perspective of neoliberal institutionalists is that conventions are as important as the distribution of capabilities among states. Neoliberal institutionalists contend that complex interdependence characterizes the relationship between states (Keohane, 1989:9). This means therefore that even though state A may be powerful and well endowed in terms of productive capacity and military potential, its relationship to state B might not be determined by its military dominance alone, rather by the benefits it gets by associating cordially with state B. This, however, applies to relationships between democratic states (Keohane, 1989:9). The contention of neoliberal institutionalists about the neorealist conception is that

> because neorealists do not properly specify the nature of the international environment, their conclusions about self help, about reliance on unit level capabilities, and about sources of shift in patterns of interstate relationships are often wrong or at best misleading (Keohane, 1989:9)

Secondly, neoliberal institutionalists and neorealists differ on the kinds of cooperation problems for which regimes are useful. Neorealists believe regimes are useful for coordination problems while neoliberal institutionalists consider regimes best suited for collaboration problems. Coordination problems, as will be seen below, can be simplified as a situation where there is plenty available for everyone such that the utilization of state A, does not impede the ability and amount/quantity that state B can utilize. Collaboration problems are those that state As' utilization of a resource directly impacts what is available for state B. Taking an example from the case study, a coordination problem means that there is enough water in the Okavango River to satisfy the water needs of all states sharing it, whereas a collaboration problem means there is not enough

water such that use of the water by Namibia for example directly affects how much Botswana can use.

The third area in which they differ is the distribution of goods resulting from regimes. Neorealists contend that regimes generate differential benefits for states. Thus, according to neorealists, "the fundamental aim of states in any relationship is to prevent others in achieving advances in their relative capabilities" (Grieco, 1988 cited in Keohane, 1989:10). Neoliberal institutionalists present the relationship between the US and Europe or Japan for at least 20 years after World War II as evidence that this is not always the case. This is the debate between absolute and relative gains (Keohane, 1989:10). Mearsheimer (1995) fervently disagrees with neoliberal institutionalists and puts forward that as long as neoliberal institutionalists have agreed to the assumptions of state centrism, rationalism and the nature of its existence, i.e. anarchy, the idea of relative gains ***has*** to be the basis for distributing benefits (Mearsheimer, 1995:19).

Fourth, they differ on how regimes are formed and maintained with the neoliberal institutionalists arguing that regimes are promoted and maintained by a hegemony while neorealists would rather point at power as the central feature of regime formation and survival (Little, 2008:299). A close examination however will find that power and hegemony are closely associated concepts since hegemony usually has power attached to it. This power could be economic, military or appeal of the hegemonic states' culture or social norms.

Finally, they differ on the effect regimes have on world order. Neoliberal institutionalists say that regimes promote world order whereas the neo realists argue that the nature of world order depends on the underlying principles and norms of regimes, not the mere presence of regimes (Little, 2008:299). For example, based on Mearsheimer's (1995) objections to neoliberal institutionalists voiced above, i.e. between relative and absolute gains, he says that regimes exert very little impact for states to conform or cooperate in the international system.

As indicated above, regime theory is a theoretical formulation that argues that cooperation is possible in a world where there is no overarching world government. Both the realist and liberal traditions have contributed to its development (Haas, 1983:23). Krasner (1983:2) defines a regime as "sets of implicit principles, norms and rules and decision-making procedures around which actors' expectations converge in a given area of international relations". He makes a distinction between principles and norms of regimes versus rules and decision making processes. Principles and norms are the foundations on which regimes are built, while on the other hand rules and decision making processes are mechanisms that allow for the observance of principles and norms. Sometimes regimes take the form of institutions and become international organizations. In other cases, they do not. Either way, international regimes embody principles of multilateralism, which,

in addition to reciprocity, also include non-discrimination and cost and benefit sharing (Nel *et al*., 2001.10).

Keohane (1989:4) defines international regimes as "institutions with explicit rules, agreed upon by governments that pertain to a particular set of issues in international relations". This definition is given within the wider understanding of institutions as "persistent and connected sets of rules (formal and informal) that prescribe behavioural roles, constrain activity and shape expectations" (Keohane, 1989:3). According to Keohane, international regimes are a subset of institutions, which could also be formal intergovernmental or cross-national nongovernmental organisations and conventions.

> Conventions are not only pervasive in world politics but also temporary and logically prior to regimes or international organisations. In the absence of conventions, it would be difficult for states to negotiate with one another or even to understand the meaning of each other's actions. Indeed, international regimes depend on the existence of conventions that make such negotiations possible (Keohane, 1989:4).

Keohane also points out that the process by which international regimes develop represents an increased institutionalization of conventions. International organisations on the other hand make the evolution of international regimes possible, as international regimes cannot adapt or transform themselves (Keohane, 1989:5).

While Krasner (1983) differentiates between principles and norms on the one hand and rules and decision making procedures on the other, Keohane (1989) only discusses rules, which are persistent and connected. For Krasner, a regime change occurs when principles and norms change as they are the foundation on which regimes are built. For Keohane, however, these persistent rules define the character of a regime or institution, therefore, a change in these rules inevitably means a change in the character of a regime. Keohane's 'rules' can therefore be equated to Krasner's 'principles and norms' and it is the change in these that will result in regime evolution. International regimes sometimes evolve into international organizations, which according to Keohane (1989), are the media for regime evolution.

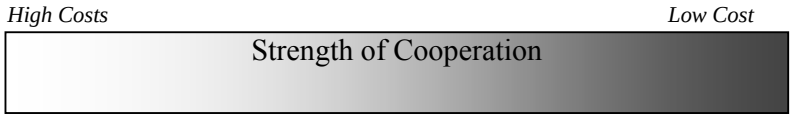
If a regime has norms and rules that give it a distinct behaviour, or in Krasner's terminology, principles and norms and decision making procedures, this makes it an active actor in international relations. It means therefore that states party to this regime, implicitly accept or allow themselves to be driven or bound by the regime in particular issues which form the agreement of the regime.

In essence, the states party to these regimes willingly surrender their sovereignty on certain issues for the sake of cooperation underlined by a positive, and possibly sustainable gain in the

area of cooperation. As an example, states willingly decide to bring borders close to their capitals[4] and cities inside the conventional territorial borders in order to make air transport possible despite the risk of annihilation through terrorism.

It is therefore plausible to argue that in any regime negotiation, the judgment is between the kind and qualitative amount of sovereignty that will be lost. I will refer to this as the costs, against the anticipated benefits resulting from such cooperation. *Cost of Cooperation* is conceptualized to mean not only the cost in form of economic terms, but also in circumstantial terms. Circumstantial terms are those conditions and facts that are associated with a particular cooperation issue. These costs could be strategic in importance or they could be intangible, for example reputational in nature. Theoretically therefore, where costs are too high, no cooperation is expected to exist. Conversely, where costs are extremely low, strong cooperation is expected to exist. This means that cooperation can be plotted on a continuum ranging from no cooperation to strong cooperation. Figure 2 below is an illustration of the above logic. The shading represents the strength of cooperation which rises as the costs get lower.

Figure 2: Illustration of strength of cooperation



The question of form and structure of cooperation has intrigued academics for many years. In a bid to understand forms of cooperation, Charles Lipson (1991) was intrigued by the proliferation of informal cooperation arrangements and sought to understand why states would want to engage in informal cooperation. He observed that currency controls were largely informal since the collapse of the Bretton Woods system in 1971; he also observed that most of the security interaction between the United States and the Soviet Union was mostly informal. Lipson (1991:496) gives the example of the United States pursuing containment rather than "roll back" even at the height of the Cold War tensions and interprets it as "tacit acknowledgement of the Soviet Union's sphere of influence in Eastern Europe" demonstrated by American inability to aid resistance movements in Germany, Poland and Hungary and its failure to deter their forcible suppression. According to Lipson (1991:498)

> The very informality of so many agreements illuminates the basic features of international politics. It highlights the continuing search for international

[4] Airports constitute international territory as they are a point of entry for foreigners.

cooperation, the profusion of form it takes and the obstacles to more durable commitments

Even though the whole idea of enforceability of international treaties has been questioned (Lipson, 1991:508), the very informality of agreements as observed by Lipson is meant to shield states from future changes in circumstances which might raise the cost of cooperation while at the same time not damaging relations between states. Lipson also observes two issues as follows:

a) That the informality is best understood as a device for minimizing the impediments to cooperation and, secondly, that

b) An advantage of an informal instrument is the ease with which it can be amended.

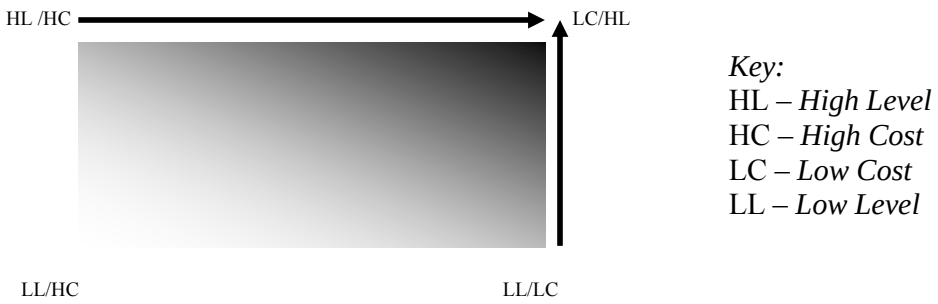
Lipson's work is an excellent illumination into informal international agreements. The nature of these agreements means that organizations can easily get out of them. The interest of this study however is on those agreements that have been reached formally and led to the establishment of an organization, as is the case in most international water basin organizations like the Okavango River Basin.

One important insight that is gained from Lipson's study however adds to the earlier observation that this discussion made - that organizations can be placed on a continuum depending on the strength of cooperation. We can therefore add that this continuum has explicit divisions - formal on the one hand and informal on the other. The part of the continuum of interest to this study is that which covers formal cooperation. Additionally, this continuum is not two-dimensional. Lipson adds an insight which makes this continuum multi-dimensional and that is the government level at which the agreement is made (Lipson, 1991:498). So for example, we expect an agreement made by the head of state to be stronger than that made by a minister. This is because the head of state signals more political authority than that of a minister. Even though Lipson applies this only to informal agreements, this applies to formal agreements as well. As an indicator or measure of political will and commitment, the level of government at which the agreement was signed matters.

Figure 3 below is a diagrammatic representation of the logic. This implies that where the costs are low and agreements are signed on a high level of government, cooperation will be strong. This is represented in the figure below by the top right side. In general, the higher the level of government, the stronger the cooperation. Likewise, the lower the cost, the stronger the cooperation. The weakest cooperation is represented in the diagram by the combination LL/HC (Low Level and High Cost), while the strongest cooperation is represented by LC/HL (Low Cost at a High Level). Considering that the configuration of costs differ from state to state, it is

expected that in a multi-party agreement for example, each states schedule of costs will be reflected by the different positions they will occupy in the diagram below.

Figure 3: Representation of interaction between level of government and cost of cooperation



Another insight that we gain from Lipson's work is the magnitude of the implications of non-compliance, in other words, the cost of not cooperating within a formal instrument of cooperation. Lipson (1991:511) mentions three issues which centre on reputation and credibility. Firstly, a state that defects from a formal cooperation agreement is perceived as an unreliable partner. It is important that states maintain their reliability as a loss of reliability might affect other cooperative agreements.

Secondly, breaking a formal agreement might give rise to costly retaliation which might range from withdrawal of cooperation in one area to broader forms of non-cooperation and sanctions. This might be especially damaging if the states involved are neighbouring countries.

Lastly, in Lipson's words a state

> [m]ay recast national reputation in a still broader and more dramatic way, depicting a nation that is not only untrustworthy, but also a deceitful enemy, one that makes promises in order to deceive (1991:512)

Clearly, these are extremely high costs associated with defection that states will want to avoid. This is especially so for states sharing borders like in the case study. Each of the states party to the Okavango River Basin Commission, share borders with one another. A functionalist approach to cooperation holds the view that cooperation in one area is only a step to cooperation in other areas and the issue of trust becomes important in the process (Alexander and Colomy, 1985:14). In the case of water cooperation issues governed by river commissions, like the Okavango, the water sharing treaty has resulted in the formation of an organization. It is formal cooperation. States will therefore likely not try to defect.

Lisa L Martin (1992) has also contributed to studying the particular forms of cooperation between international players. Martin (1992: 766) lists the four problems of cooperation as collaboration, coordination, suasion and assurance. She introduces the concepts of "institutions of

multilateralism" and "multilateral organisations" and adopts the definition of multilateralism as postulated by John Gerard Ruggie (Martin, 1992:767). (A definition and further discussion on multilateralism is covered on page 18 below). Martin (1992) contends that multilateralism consists of three principles - indivisibility, non discrimination and diffuse reciprocity. The study returns to the issue of multilateralism later.

Martin (1992:769) discusses collaboration problems as those that occur when the utilisation of common resources is contested because utilisation by one necessarily means less of what the other will be able to utilise. On the other hand, coordination problems arise where there is plenty available for everyone and the only thing that needs to be managed is the exploitation of such a resource (Martin, 1992:775). In a related discussion, Hasenclever *et al.* (1996:62) have divided issue areas into three broad simple categories namely security, economic wellbeing and the domain of rule. According to them, issues classified as dealing with economic wellbeing are most conducive for regimes because "divisible 'gain' rather than indivisible 'power' is at stake". Hasenclever *et al.*(1996) use different terminology from that used by Martin. They use "Consensual" to mean a situation of scarcity where every state involved desires the same valued resource but cannot fully be satisfied because there is not enough for everyone. On the other hand, it is a "dissensual" situation when both the values and means of exploitation are ***not*** acceptable to every actor (Rittberger and Zurn, 1990 quoted in Martin and Simmons, 2002; Hasenclever *et al*, 1996:63 and Rittberger, 1993:14). From the above, it is known that water resources in the Okavango fall within the issue area of 'economic and well being'. This, therefore, explains the existence of the regime in the first place

As implied by Martin, a convention is an institution of multilateralism while a formal organization is a multilateral organization (Martin, 1992:770). In a collaboration problem, "conventions alone without monitoring or enforcement cannot ensure cooperation". It therefore means problems of collaboration are best dealt with by formal organizations. It is however not necessary according to Martin, (1992:776) to establish a formal organization if the problems being dealt with are coordination problems. This raises important questions for the study. It becomes necessary to find out if the existence of OKACOM was warranted in the first place by determining the kind of cooperation problems it is meant to deal with. This question is dealt with in chapter three on page 33.

Even though Martin's study and analysis was at a global level the insights gained are just as valuable for sub-regional cooperation structures like OKACOM. In her discussion of suasion problems, she conveniently brings up the issue of the hegemony's impact on cooperation which clearly does not apply in this case considering the fact that none of the countries under study could

be said to have tremendous power, however defined, to sway the opinion of other countries, nor are they displaying hegemonic tendencies. For this reason, suasion and assurance problems will not be discussed further.

This discussion so far has revealed that there are different forms of cooperation agreements. It has looked at informal agreements and their advantages, however, the central interest of this study is on formal water cooperation agreements governed by a formal organization. As indicated above, states involved in these agreements will want to avoid the option of defecting, as they may not want to risk the cost of defecting.

Accounting for the future is a very difficult endeavour particularly because of the different combinations of possibilities that might obtain from different actors. The same goes for negotiations towards formal agreements. According to Koremenos *et al*. (2001:781), the value of future gains has to be big enough for states to engage in a cooperative agreement. Out of the unpredictability of the future and the fact that states guard their sovereignty jealously, it can be confidently hypothesized that the cost of cooperation represented by the unpredictability of the future and associated costs of defection will affect the structure of cooperation that emerges. This is further reinforced by the recent securitization of the environment of which water is a part. Given that the likelihood of defection is low, it is plausible to argue that the cost of cooperation determines the structure of cooperation.

Discussing structure and form as has been done here, closely relates to the work of Koremenos *et al*. (2001) about the design of international institutions. In their study, Koremenos *et al*. (2001:762) argue that states rationally design international institutions to further their own goals. This study agrees with them that the design is rational; however it differs in its proposition in a slight but important way. The study intends to prove that states rationally design international water agreements to protect themselves in addition to advancing their interest. Advancing their interests alone carries the connotation of maximizing gains which further connotes proactive risk taking behaviour, whereas the hypothesis presented here intends to argue that they rationally design the institutions to cushion themselves from unforeseen circumstances knowing that defection is not a likely option. The proposition in this study assumes a conservative, more cautionary approach to international cooperation. In the area of water cooperation, this has been defined as “Water Rational Cooperation”, where the logic of long term access to water overpowers the logic of a conflictual approach as it may not guarantee sustainable access (Alam, 2002). Given Koremenos’ study, it can be further argued that the cost of cooperation determines the structure of cooperation through rational design by states party to the cooperation regime.

Turton (2002:94) contends that the Okavango River Basin Commission is not technically an institution because it does not satisfy conditions found in a definition of institution as espoused by Schmoller in 1900 (Turton, 2002:94), and also because of the fact that it does not have a permanent secretariat and funding mechanism (Turton, 2002:95). However, this was the case in 2002. While OKACOM may not have had a permanent secretariat and funding mechanisms then, it now does. The secretariat was established in April 2005 (see chapter three for a detailed discussion). This therefore brings an important point which Turton also highlights, namely that regimes evolve with the complexity of cooperation problems they are tackling (Turton, 2002: 95). This is also a fact that the study will not take for granted, namely that regimes or transboundary organizations are in a constant flux and these changes are being carefully monitored by member states.

Organisations that emerge out of international agreements like the Okavango River Basin Commission and other commissions are what Martin (1992:767) calls Multilateral Organisations (MO) as oppossed to conventions and agreements - formal or informal - to which she refers to as Institutions of Multilateralism (IM). Before this study can constructively engage in the debate about the design of these multilateral organizations, it is important to get acquainted with the way they operate. The following section will review the issue of multilateralism by looking at the three principles that were highlighted earlier on.

2.3 Multilateralism

John Gerard Ruggie, a neo-liberal institutionalist, has written extensively about multilateralism (see Ruggie, 1998). He is generally critical of the absence of the discourse of multilateralism in the discussion of regimes and institutions as it is a "core feature of current international institutional arrangement" (Ruggie, 1998:105). He notices that whenever multilateralism is mentioned in the literature, it is mentioned in its nominal form i.e. definitional instead of the more qualitative forms like its features which make it an "institutional fact". According to Ruggie (1998:109), therefore, multilateralism refers to:

> An institutional form, which coordinates relations among three or more states on the basis of 'generalized' principles of conduct - that is principles, which specify appropriate conduct for classes of action without regard to the particularistic interest of the parties or the strategic exigencies that may exist in any specific occurrence

This definition can be divided into three essential factors, which, if present, would constitute a multilateral organisation in Ruggie's sense. The study specifically draws on Ruggie's conception because Martin (1992) used the word in a more nominal, as opposed to a substantive,

sense (Diebold, 1988 cited in Ruggie, 1998:105) or qualitative form. An institution is a multilateral institution if it:

a) Coordinates relations among three or more states

b) Uses 'generalized' principles of conduct

c) Reduces or eliminates account of particularistic interests

Given these definitions, an important question emerges: is the organization under study a multilateral organization? Firstly, the Okavango River Basin Commission coordinates relations between three states namely Angola, Botswana and Namibia. Secondly, according to de Wet *et al*. (2008:45), the commission's mandate is to investigate the pre-requisites and set up conditions. This therefore means that whatever conditions will be set, will be purely based on the research or investigation carried out without account of 'particularistic interests' that might be prevailing in the member countries. It means therefore that relations among these states will be objectively guided by the findings of the commission.

This leaves out the generalized principles of conduct. The principles of multilateralism include indivisibility, non discrimination and diffuse reciprocity. One of the difficulties of applying these principles to an organization like OKACOM is that the definition of the principles of multilateralism as we know it today, has largely resulted from the collective security discourse (Ruggie:1998:112 and Martin, 1992:767), which makes the application of indivisibility problematic. The other principles of non-discrimination and diffuse reciprocity are especially reflected in the design of the organization with the chairpersonship rotating among the three member countries and the secretariat also being hosted on a rotational basis (de Wet *et al*., 2008). Having looked at the more theoretical discussion, this study now turns to review available literature with a view to identifying gaps in the literature. This is dealt with in the following section.

2.4 Strategic considerations in Transboundary River Cooperation – A Review of Literature

This section will review available literature on regime formation processes in the management of transboundary rivers. While it is recognised that much can be learned from reviewing a range of literature with respect to geographical dispersion, for the sake of precision, this review will restrict itself to literature relevant to Southern Africa.

Regime formation starts at the process that spells the framework of cooperative arrangements in transboundary river management on the global level. This is the level, for example, of the United Nations at which the United Nations Convention on the Law of the Non

Navigational Uses of the International Water Courses was deliberated. At this level, strategic considerations are expressed through the system of voting. Eckstein (2002) notes that these strategic considerations, such as economic, geographic and other national interests have had the result that the future of the convention is uncertain. The convention will enter into force after the ratification, approval or accession of 35 countries. By 2002, only 12 countries had ratified (Eckstein, 2002). WWF International reported that the convention was short of 18 parties for the convention to enter into force in 2007 (WWF, 2009).

At the regional revel, the mechanism is the same where member states express their opinions through voting. Strategic considerations do not seem to have had such a high profile effect at the SADC level evidenced by the fact that on the two occasions the protocol has been presented for ratification, ratification has happened without major problems. This might be because as a region, there are already many cooperative arrangements so that arriving at agreements may not be as difficult, facilitated by the regional integration process.

While at the UN Convention level and the regional level, the impact of strategic considerations like sovereignty are manifested in the progress (slow / fast) to enforcement of the convention, at the basin level, the impacts are less clear. This is firstly because basin countries share boundaries and therefore by extension a history of intercourse. This intercourse might be positive or negative. There might be prior hostilities or cooperative arrangements which will greatly impact the approach taken towards other neighbours. Secondly, sharing resources like transboundary rivers raises questions intimately linked to state sovereignty. States guard their sovereignty jealously such that any dealings which might affect state sovereignty are equated to issues of national security. This makes the behaviour of states unpredictable and worth studying to reveal any underlying patterns.

Turton (2003) provides an excellent starting point for studying river basin institutions. He explores the link between water and the securitisation discourse. His work draws from the work of Buzan (1991) and Schultz (1995). From this review, Turton notes that the process of securitization of resources required that these resources be framed as existential threats, which would then categorise them into special resources beyond regulation using ‘normal’ rules. Just like the concept of security complex, Turton argues that in Southern Africa, there is a hydropolitical complex. A security complex has been defined as a “set of units whose processes of securitization, desecuritization or both are so interlinked that their security problems cannot be analysed or resolved apart from one another” (Buzan, 1998 cited in Turton, 2003). This has been further refined to apply to water in the hydropolitical security complex sense and is defined as “those states that are geographically part 'owners' and technical 'users' of rivers and further, as a

consequence, consider the rivers as a major national security issue" (Schultz, 1995 cited in Turton, 2003). Generally, Turton does not support the idea of securitization of resources and looks at the development of institutions as a good way of desecuritizing resources and politicising them, which is generally viewed by him as a good thing. The involvement of SADC, which can be viewed as a security community (Ngoma, 2005:10) in water management as an institution therefore paradoxically desecuritises water.

Several works have been done specifically focusing on Southern Africa and the Okavango basin in particular. Notable among these are three books, edited by Turton and Henwood (2002), another edited by Nakayama (2003) and the third one edited by Turton *et al*. (2003). Turton and Henwood (2002) and Nakayama (2003) focus on Southern Africa as a region while Turton *et al*. (2003) focus on the Okavango River Basin.

In Turton and Henwood, a contribution by Wester and Warner (2002) stands out. Wester and Warner (2002:61) contend that while the river basin approach and public participation are accepted precepts in river basin management, the form of institutions supposed to manage these river basins is not as self-evident. They argue that the approach taken by most organisations and experts is meant to depoliticise river basin management. These organisations and experts argue that basin boundaries are a given by nature. This approach has led to the formation of institutions that are difficult to sustain because of the overlap between basin and state boundaries (Wester and Warner, 2002:63). Since environmental use and especially water use is a matter of a choice between several alternatives by the state, this necessarily makes water management a political issue and therefore, it is not possible to depoliticise it. Wester and Warner (2002) identify three most occurring organisational models namely hydrological, administrative and coordination models. In the hydrological model, all the structures of the river basin management are based on the hydrological boundaries with all decision-making centralised in one agency. The administrative model is the opposite of the hydrological model where management is the responsibility of states, regions, districts, etc. with political boundaries as the determining factor. Lastly in the coordination model, management is coordinated by river basin councils or coordinating bodies.

The study is useful in illuminating the several management models that are available, and the fact that it is possible to make policy for a basin without the presence of a basin policy maker (Wester and Warner, 2002: 67). The study does not however, shed any light on how this can be done across countries and what complexities might arise as a result.

Molden and Merrey (2002), in their contribution to the volume, highlight the difficulties of institutional up-scaling in geography and size. They emphasise that in Africa, the skills necessary

for establishment of small-scale local water users organisations might not be transferable in geographical scale to basin-wide user organisation because in order to succeed, there is need for a more educated populace, adequate human resources, shared language and culture, good physical infrastructure, effective legal and institutional frameworks and strong community institutions. Apart from its Eurocentric aftertaste, the work of Molden and Merrey falls more within the depoliticising literature as it does not look at the political side of river basin management, which is at the centre of this study. Politics, in their work only comes in to facilitate what planners have planned – political will to act (Molden and Merrey, 2002:155).

In the work edited by Turton *et al*., (2003), Turton (2003) makes a contribution that discusses the concepts of negative and positive peace and the desecuritization of water discourse and putting it back in the domain of politics where it belongs. This links nicely with the discussion he started above about a hydropolitical complex. For instance, Turton differentiates between security of supply in a situation of positive peace and negative peace in the way it is viewed by other riparian states. In a situation of negative peace, attempts to improve security of supply are interpreted by other riparian states as insecurity of supply for them. However, in a situation of positive peace, a coordinated basin-wide planning approach increases the security of supply for all riparian states. According to Turton (2003), threat perceptions also differ depending on the conditions of peace that are prevailing. Competition is dominant as a standard threat perception in negative peace while in positive peace, it is not. Turton further discusses the development of the Okavango River Basin Commission in the context of a hydropolitical complex which he argues exists in the region to securitize water management. The hydropolitical complex is analogous to the security dilemma (Snyder, 1984 and Glaser, 1997) in that it involves trust and interpretation of actions between states. While I agree with Turton that river basin management desecuritizes water management and politicises it, I find it hard to agree with his characterisation of conditions of negative and positive peace. There is not such a clear divide at any one time between the so called positive and negative peace given the multiplicity of state relations which might affect perceptions of the other. Nevertheless, Turton does not go further than this to look at the role that political considerations play in international river basin management in Southern Africa or indeed in the Okavango.

Mbaiwa *et al*. (2008) discuss the impact of environmental institutions on the livelihoods of households and individuals that fall within the jurisdiction of these institutions. In their case studies, they cite examples of the government of Botswana relocating inhabitants of the Moremi Game Reserve, which falls within the Okavango Delta. While their study is a good look at the institutional impacts at the micro-level i.e. household and individual levels, and while it makes

good contributions to our understanding of environmental institutions' antagonistic relationship with communities, it was not designed to interrogate institutional forms. It is also limited in scale to state institutions while this study is working more on the interstate institutions and the impact that political (strategic) considerations have in the way they are formed and maintained.

In Nakayama (2003), most of the contributions are general, dealing with such issues as resource management (Heyns, 2003); public participation (Bruch, 2003); fresh water treaties (Giordano and Wolf, 2003) and other more general issues. There are, however, interesting contributions by Nakayama (2003), Turton (2003b), Chenje (2003) and Mohamed (2003).

Nakayama (2003:102) looks at the roles that RBOs should play in a real situation as opposed to an ideal situation. He does this by covering the roles played in history and gives examples of real situations. Turton (2003b: 136) investigates the hydropolitical dynamics of the Orange River Basin. He covers the national interest with respect to South Africa's hydraulic mission manifested through the building of a complex irrigation infrastructure and the inter basin transfer (IBT) largely as a result of thermal power generation. As will be seen in later sections, a hydraulic mission refers to a country's deliberate drive to harness water resources for social and economic development. This has resulted into the linking of almost every basin in South Africa including the four international basins namely Limpopo, Orange, Incomati and Maputo (Turton, 2003b:158, Institute for Water and Water Shades, 2009). According to Turton (2003b), this has had the impact that there has been a clash between the South African national water act, which regards all water as a national asset to be moved to where it is most needed, and other legal systems (Basson, 1999 cited in Turton, 2003b:150), which view river basins as a coherent whole with the water therein belonging to the riparians of that particular river. This is an example of the impact of political decisions on the use of water. It does not however tell us much as far as institutions are concerned.

In a contribution to the same volume edited by Nakayama (2003), Chenje (2003) discusses hydropolitics in the Zambezi river. His discussion is general, looking at the historical impact of politics on cooperation in the Zambezi. The closest he comes to discussing institutional forms is when he discusses the composition of the proposed commission in the transboundary river. He voices opposition to the tendency of commissions being formed by personnel from water departments only (Chenje, 2003:201).

Mohamed (2003) makes an important contribution, which relates more to this study, when he makes a comparative analysis of how geographical boundaries, economic capacity, river hydrology and political relations interact to affect the joint development of international rivers in the Limpopo and Orange rivers (Mohamed, 2003:210). From his case study, he finds four factors

as affecting the functionality of cooperation, namely the type and structure of cooperation (bilateral versus multilateral); the objective and scope of cooperation; the interests of the different states in the basin; and lastly trust between states. His study is an important contribution as it helps to further focus the inquiry in the present study. Special attention will be given to these four factors in the case study analysis to come in the next chapter. While Mohamed (2003) focusses on the failure and/or success in terms of materialisation of cooperative arrangements as a result of political and other considerations, the present study, in addition to focussing on the Okavango River Basin, focuses on the role that political considerations play in the form that institutions take and how the operation of these institutions is affected by these political considerations, something that Mohamed (2003) did not cover.

Heyns (2006) examines the hypothesis that successful management of a river basin management requires a trialogue involving the political, social and scientific spheres. In his study, he concludes in support of the trialogue hypothesis asserting that without the trialogue, which is manifested in the Okavango River Basin Commission, an effective partnership would not have been achieved. This partnership, he claims, has promoted good governance. Heyns falls short of investigating the interests and agendas with which each of the members of the trialogue comes into the partnership. This study, in Heyns terminology, is an attempt to investigate the impact of interests that the political sphere of the trialogue has on cooperation. This is the gap that this study intends to fill. It will look at how strategic considerations affect the cooperation process and the need for continuous evolution of regimes to adapt to changing circumstances in order to remain relevant.

2.5 Conclusion

The review of regime theory in this chapter has looked at the core assumptions of regime theorists. Insights were drawn from theorists like Keohane and Mearsheimer in relation to their debate on regimes. It was noticed that regime theory represents the closest positions from Liberal and Realist based conception, with agreement on the major assumptions of the theory. In the definition of the regime, characteristics of a regime were highlighted for example the fact that they have implicit principles, norms, values and decision-making procedures. Implicit means that these principles might be in written or formal format or they may actually be informal, forming part of the organisational practice. Principles, norms and decision making procedures form the core of regimes.

The chapter has looked at the theory behind international cooperation from both the neoliberal perspective as well as the neorealist perspective. The chapter has further elaborated the hypothesis mainly drawing on the work published in the journal *International Organisations,* that

deals with the form and structure of organisations. The conditions under which cooperation exists among states and the form this cooperation takes were discussed.

In addition literature on strategic considerations in river basin organisations especially as it pertains to Southern Africa has been discussed. In the review of this literature, key concepts including the concept of a hydropolitical complex, have been covered. It has been observed that issues of international water cooperation belong to the political sphere as opposed to the security sphere. A desecuritisation and subsequent politicisation of water issues is therefore generally considered a movement in the right direction.

While politicisation of water issues has been generally accepted as the direction to take, no systematic examination of the interests and agendas behind the politicians or state makers has been carried out. The current study is an attempt in this direction. Chapter three covers a case study of the Okavango River Basin for this purpose.

CHAPTER THREE: CASE STUDY – THE OKAVANGO RIVER BASIN COMMISSION (OKACOM)

3.1 Introduction

This chapter will present a case study of cooperation in the Okavango Delta. The chapter starts with a brief historical review of cooperation prior to the independence of Namibia to set the scene for what was to follow post independence. In this review, South Africa is prominent because of its colonial responsibility of administering South West Africa (now Namibia). It is also prominent because of its pronounced political and military presence during the time under review and its perceived 'hydro hegemonic' tendencies as argued by Turton (2005).

After the historical review, the chapter will cover the regime formation process that resulted in the Okavango River Basin Commission (OKACOM). This part of the case study will cover issues dealing with the motivations for regime formation as well as the challenges that the process faced and continues to face. Later in the chapter, other actors that have contributed to the form and shape of the regime, over and above the three states will be covered. The purpose of this chapter is to demonstrate how states use regimes to protect their sovereignty and to determine how this affects the structure of cooperation. It will also be argued that if changes do not occur in the cooperative configuration, the regime risks failing. Central to this argument is the fact that OKACOM has not yet demonstrated its ability to solve cooperation problems it is confronted with.

3.2 Historical Review (1920 – 1990)

Water issues and water cooperation have a long history. Current practices and conventions take root in the Mar Del Plata United Nations Conference in 1977 from which other instruments like the Lagos Plan of Action of 1980, with regard to development of water resources on the continent, are derived (Mutoti, 2001:1). The history of water cooperation and exploitation to fuel development in Southern Africa goes back long before the Mar Del Plata Conference. Between 1926 and 1969, three agreements had already been entered into concerning the Cunene River between South Africa and Portugal, which was meant to "mobilize water resources in order to create the necessary energy infrastructure on which subsequent developments could be based" (Turton, 2005:6; Heyns, 2003:10). Later in 1979, the South African government planned to abstract water (the action of diverting water or a portion of it, from its natural course for purposes of agricultural, domestic or industrial use) from the Chobe River, a tributary of the Zambezi River, which would be channelled through Botswana into South Africa as a way of augmenting its water resources (Turton, 2005:8). However this plan did not materialise as there was a change,

spearheaded by Mugabe in Zimbabwe, in the attitude of the states close to South Africa that decided to form the Southern Africa Development Coordination Conference (SADCC), in direct opposition of South Africa's policy of apartheid. This grouping was also meant to reduce economic dependence on the minority white government in South Africa. With this kind of environment, the project would not continue. At this time the states that made up the SADCC were Botswana, Lesotho, Swaziland, Mozambique, Angola, Zambia, Malawi, Tanzania and Zimbabwe (Turton, 2005:8)

Southern Africa is prone to droughts. The issue of water found its way into the political arena of the SADCC in 1984 when the SADCC host, Kenneth Kaunda, blamed water scarcity and drought for the shortage of food and the poor prospects for agricultural development (Turton, 2005: 9). This can be traced as the beginning of hydropolitics within the now Southern Africa Development Community (SADC) grouping. South Africa, as a 'hydrohegemon', as referred to by Turton (2005), was closely connected in the water politics of the region, especially given South Africa's involvement in South West Africa, and the fighting in Angola. Attempts were made between South Africa and Botswana to reach economic agreements that would have included possible access to the Okavango River (Turton, 2005: 10). These agreements did not materialise. There have been, however, other agreements signed with respect to other international rivers between Botswana and South Africa. In 1983, an agreement was negotiated between Botswana and South Africa on the Limpopo Basin shared by the two countries. Mohamed (2003:222) contends that cooperation on this part of the delta started as early as 1967. This agreement has evolved from the original Joint Permanent Technical Committee in 1983, to the Joint Permanent Technical Commission in 1989, and finally in 1995, it was replaced by another Water Commission (Heyns 1995 and Pallet, 1997 cited in Els and Rowntree, n.d). Botswana is also party to an agreement involving Mozambique, South Africa and Zimbabwe on the establishment of the Limpopo Basin Permanent Technical Committee (LBPTC) signed on the 15th of June 1986 in Harare, Zimbabwe. This was not functioning until it was replaced by a second agreement in 1995 (Mohamed, 2003:221).

Upon Namibian independence, the Joint Permanent Water Commission (JPWC) between Botswana and Namibia was signed on the 13th of November 1990 (Heyns 1995 and Pallet, 1997 cited in Els and Rowntree, n.d). Earlier in 1987, the South African government had entered into an agreement with the transitional government of Namibia on the creation of a Joint Technical Committee to oversee future projects in the Orange River (Turton, 2005:11).

In Angola, prior to independence, the colonial government had indicated the potential for the establishment of 350 MW hydro electric generating plant and the irrigation of over 54 000ha

in the Cuando Cubango province which would utilise the head waters of Cuito River and the Cubango River from which the Okavango River emerges (Pinheiro, *et al*. cited in Mbaiwa, 2004:1322). In Namibia, preliminary feasibility studies conducted by the Portuguese showed that there was a possibility of electing a 40MW hydro electricity generating station at Popa falls, on the Okavango River in the Caprivi Strip. The Namibian government has since adopted these plans (DWA, 1969 cited in Mbaiwa, 2004:1322). This is in addition to a South West African government water master plan of 1974 which puts in place the development of the Eastern National Water Carrier (ENWC) to connect and draw water from the Okavango River (Heyns, 2007b:154).

At independence, Namibia sought to affirm commitments made by the colonial government between the Portuguese and South Africans about the Cunene River, a common river between Angola and Namibia. Out of this reaffirmation came the re-establishment of the Permanent Joint Technical Commission (PJTC) which would deal with the management of the Cunene River. This commission was re-established in September of 1990. Two months later, as pointed out earlier, the government of Namibia also signed an agreement with the government of Botswana - the Joint Permanent Technical Commission (JPTC), to deal with management of common water resources (Pinheiro *et al*., 2003:115). The development of the Okavango Basin Commission owes its origins in the independence of Namibia as Namibia aimed to consolidate its hydraulic mission. A *hydraulic mission* is a deliberate attempt by a state to ensure security of supply with regard to water. It engages in strategies and long term projects that will ensure that access to water does not hinder development. The following sections will look at the processes which led to the development of the commission.

3.3 The Development of a Water Regime

Soon after independence, the new government in Namibia moved to renegotiate the treaties, now that it was a sovereign state. This led to the establishment of the Permanent Joint Technical Commission between Namibia and Angola on the Cunene River and the establishment of the Joint Permanent Commission between Namibia and Botswana on water matters of mutual interest (Heyns, 2007a). Water matters of mutual interest according to Heyns (2007a:6) included the Okavango, the Zambezi, ground water and other water related issues such as environmental protection of the Kwando-Linyati-Chobe river system through the joint *Salvinia Molesta* (Kariba weed) control program.

The move on the part of the government of Namibia to renegotiate these treaties came out of the realisation of both its developmental needs and its geophysical realities. According to Heyns (2007b:154):

> Namibia has an extremely arid hydro climate. The combined potential of Namibia's internally generated surface runoff and groundwater resources are estimated at only 500Mm3/yr. Recent estimates have shown that Namibia's future water demand would exceed this figure by the year 2020 (Heyns, 2004). This means that Namibia must be able to draw water from the perennial rivers on its borders to augment the scarce internally generated water resources in the interior of the country (Heyns, 2002).

The cooperation of the riparian states was therefore extremely important (Angula, 2003:7). This is because the only possible source of water was the Okavango River. Other alternatives include drawing water from the Zambezi or the Orange River, on which Namibia has already developed five (5) dams and is considered to be optimally exploited (Heyns, 1995: cited in Turton, 2005:18 and Wolf, 2003 also cited in Turton, 2005:18). The water of the Okavango is meant to supply the capital city, and other inland developing areas. The sheer distance from the Orange River at the southern border with South Africa or the Zambezi in the northwest is prohibitive (Turton *et al*., 2002). In order to make this project a reality (abstracting water from the Okavango), it meant that Namibia had to hold negotiations with the two riparian states using two different forums. This meant complicated and time consuming negotiations. There was, therefore, a need to consolidate the two Joint Permanent commissions into one. Around this time, there was a paradigm shift within the area of conservation that advocated basin-wide rather than local, territorial or catchment focussed approaches. This paradigm shift provided further justification for the Namibian proposal. The Namibian government planned to propose the establishment of a tripartite commission involving the three riparian states.

An opportunity arose when, in 1991, both commissions were meeting in Namibia's capital Windhoek (Heyns, 2007a:6). A suggestion was made to both commissions separately for the possibility of merging them into one. The Namibian Government had already tasked Piet Heyns, then a civil servant of the Namibian government, to come up with a draft agreement for the said proposed tripartite commission (Heyns, 2007a:6). At the end of the respective commission meetings, a joint meeting was organised at which it was agreed that the tripartite commission was a viable plan of action. The Piet Heyns draft was adopted as a departure point for future negotiations (Heyns, 2007a:6). This first tripartite meeting set the foundation for the establishment of the commission.

It is useful at this juncture to take a cursory look at the parties that were going to be brought to the negotiating table. Angola was the upper riparian. By 1991, Angola had been engaged in a civil war that had by then been going on for 16 years. The country had been effectively divided by the two main warring factions namely the Popular Movement for the

Liberation of Angola (MPLA) which was the governing party and National Union for the Total Independence of Angola (UNITA) (Collelo, 1991). UNITA refused to recognise the authority of the MPLA Marxist government. In May 1991, after a year of negotiations, Cuba removed its troops and a peace treaty was signed by Savimbi and Dos Santos on the 31st of May 1991 (Conciliation Resources, 2009). The Cuando Cubango Province was under the control of UNITA, while the participants in the water treaties were from the group controlling Luanda, the MPLA. At the time of the negotiations in 1992, there was relative peace as the country was preparing for the 1992 elections. Overall, Angola is said to be water rich, according to Turton *et al*. (2003:9), straddling five transboundary river basins (Cunene, Cuvelai, Okavango, Zaire and Zambezi). Any environmental management of the upper reaches of the Okavango was impossible at this time as it was littered with land mines and unexploded ordinances (UXOs) (Turton, 2002).

Botswana on the other hand had been experiencing sustained economic growth due to the discovery of minerals and was continuing the development of its mineral potential. Food self sufficiency was at this time an important issue. This is reflected in Botswana's National Development Plan (NDP) 6, which covered the period 1985-1991 and which specifically mentions food self sufficiency to be a national priority. The subsequent NDP, NDP 7 also emphasised food security as a priority (Hasler, n.d). What is critical about these national priorities is the strategy for achieving them. In this case, these priorities would be achieved through increased flood plain agriculture and irrigation, for which the Okavango Delta was an important resource (Hasler, n.d). This is in addition to activities that were already happening in the Okavango delta including the channel clearing for purposes of tourism, undertaken by tourism operators and Department of Water Affairs. This channel clearing has been undertaken since 1966 until the present to enable navigation of the channels (Hasler, n.d).

For Namibia, a reassessment of the plans made in 1974 had reconfirmed the need to finally connect the country's network of water system known as the Eastern National Water Carrier (ENWC), to the Okavango which would provide an opportunity for the arid country to tap into the only perennial river within its sovereign territory (Green Cross, n.d). The government was also considering the development of hydro electricity at Popa falls (Mbaiwa, 2004:1322), and the irrigation of 15 000ha of land for agricultural production (Heyns, 2007).

The joint development of the delta was also important, as it was the only way to ensure the protection of the near pristine ecosystem, which supports a variety of plants, animals and a large human population. According to Turton *et al*. (2002:11),

> the Okavango river is but one component in a complex ecological web of cross cutting linkages. Embracing perennial rivers, seasonal wetlands and varying types of desert and

semi-desert, with water availability in both spatial and temporal terms being one of the fundamental driving variables.

It was clear that the development of the Okavango River needed a coordinated approach in order to achieve sustainable use. However, after the initial meeting where it was agreed to hold discussions towards the goal of establishing a commission, it took more than three years before a convergence of opinion could be reached on the final text of the agreement (Hynes, 2007b:155). This was basically because of three principal reasons.

Firstly, Angola was in a state of war. Water management was therefore not such a pressing agenda as waging the war. This meant that Angola was not able to make available its personnel to participate in the negotiations. This was therefore a question of capacity on the part of Angola, which made the water commission a relatively unimportant need in 1992 (Heyns, personal communication). Swatuk (2003:129) argues, however, that Angola's passive participation in the process was not a result of the fighting. He instead argues that it results "from Angolan unhappiness with Namibian developments in the Cunene River Basin and unwillingness to expose its plans for the Cubango beyond Savimbi".

Secondly, the Botswana government already had an overarching treaty with the Namibian government which was supposed to cover waters of mutual interest including the Okavango waters. As a result, there was not enough incentive to work on a treaty specifically for the Okavango River (Heyns, personal communication).

A third problem which is likely to impact the relationship within the tripartite for the foreseeable future, was the language barrier. Namibia and Botswana both use English as their national language. Angola on the other hand uses Portuguese as the national language. Documents drafted in English had to be translated into Portuguese for the Angolan counterparts to review and then translated back into English with the comments (USAID, 2007:16).

Eventually however, an agreement was reached and on the 15th of September 1994, the Okavango River Basin Commission (OKACOM) agreement was signed. For Namibia, the process of abstracting water from the Okavango was one step closer, as Namibia had long realised that achieving this objective would be impossible without first discussing interests and building trust and understanding among the riparian states (Heyns, personal communication; Mohammed, 2003). Heyns (2007b) notes the complexity of governing resources that straddle several boundaries and he observes that governance processes are much more complex compared to governance within one sovereign state. The complexity comes as a result of the different state interests that have to be reconciled in the process of cooperation. It was for this reason that regimes have been found to be salient in easing complexity of governance issues as identified by

Heyns, by ensuring that they are managed using established principles and procedures of decision making. The OKACOM agreement was yet another creation of a regime meant to manage the states' relationship vis-à-vis the utilisation of the water resources that if used separately, would be prone to unsustainable use and environmental degradation.

3.4 OKACOM's Evolution

In chapter two under the discussion of regimes, it was observed that regimes tend to evolve. They evolve with the complexity of tasks that are before them (Turton, 2002:94). The OKACOM agreement provides for the appointment of advisors by the leader of delegation. These advisors can attend meetings to advise the commissioners. It also stipulates that only three of them can attend a meeting at any one time. This has been made into a more permanent structure through the Okavango Basin Steering Committee.

3.4.1 The Okavango Basin Steering Committee (OBSC)

After starting its operations, the OKACOM, needed to manage several projects that were being implemented under its patronage. As the time for the commissioners was becoming stretched, the OBSC was established to take over the role of overseeing and guiding technical activities of these projects (Heyns, 2007b:157). The OBSC is made up of nine members, three appointed by each member state. A member state appoints one of the three delegates as a head of delegation, who becomes a co-chairperson of the steering committee. The chairpersonship rotates depending on the country where the meeting is held (Heyns, 2007b:157). The OBSC can, like the Commission, nominate other people to attend its meetings as advisors, with the exception that need dictates the number of people that may be invited under the OBSC, whereas with the commission, the number is limited to no more than three regardless of need (Heyns, 2007b:157; Treaty, 1994).

3.4.2 The Okavango River Basin Commission Secretariat

The process of evolution did not stop with the formation of the OBSC. In mid to the late 1990s the activities of the commission and the OBSC were in their infancy stages. At this time there were few actions that needed to be dealt with (Heyns, 2007b:158). As pointed out above, the very functional requirement of the commission became its driver for evolution. It was realised that the amount of work that needed to be carried out to produce information necessary was enormous, coupled with the human resource requirement and associated funding (Heyns, 2007b:158). Heyns (2007b) compares OKACOM at that time to a government that did not have a civil service. Slowly, inefficiencies started manifesting themselves. One important mishap was the failure for the commission to approve a final Global Environmental Facility (GEF) report commissioned with the aim of carrying out a Transboundary Diagnostic Analysis (TDA), meant to be a baseline

study. Although the work on the TDA was completed between 1997 and 1999, the final report was never finalised and approved by OKACOM (Heyns, 2007b:158).

Issues like these led the Namibian delegation to submit a formal proposal at an extra-ordinary meeting held in May 2003, for the establishment of permanent administrative arrangements for the commission (Heyns, 2007b:158). Further debate led the commission to seek funding for a feasibility study. A feasibility study for the establishment of the secretariat was finalized in April 2004. It confirmed the need for a permanent structure. The recommendations of the report were accepted by the commission. As a result, a memorandum of understanding to establish the OKACOM Secretariat was signed in April 2005. Meanwhile, the USAID Integrated River Basin Management (IRBM) project, an institution strengthening project, started providing interim secretariat services. The secretariat was handed over to OKACOM in 2007, with the initial funding for its activities coming from the Swedish Development Cooperation Agency. This funding was integrated into the support that was already being provided by USAID (Andreini, 2007).

The Secretariat has been tasked with activities which, according to Heyns (2007b) can be grouped into five functional areas. The first is related to administration, financial control and technical support, which can be said to be the 'core' secretariat duties. Secondly, the secretariat has been tasked with functions relating to provision of support to joint management of projects in the basin being implemented under the auspices of the commission. Thirdly, the secretariat has a coordination function which requires it to harmonise development activities in the basin and facilitate participation of stakeholders. Fourth, it has a communication function which includes the maintenance of a comprehensive database on the basin with a view to enabling a trialogue between the states represented by the commission, and academia and civil society. Lastly, the commission has been tasked with a screening function which relates to ensuring that decisions made by the commission and proposals for new activities are executed (Heyns, 2007b:159). The secretariat is managed by an Executive Secretary who is currently Dr. Chonguica (Chonguica, personal communication). It also planned to field personnel with competences in "water resource management, economics, social affairs, communication, awareness-raising, information technology, environment, legal affairs, capacity-building and training" (Heyns, 2007b:159).

3.5 Regime Formation vs Cooperation Problems

In the second chapter, it was discussed that the cooperation problems at the centre of regime formation affect the path of evolution a particular regime will take. One question that was asked in that chapter was pertaining to the kind of cooperation problems being faced in the Okavango Basin. From a review of the process of cooperation, it can be said that the basin has two

cooperation problems, namely coordination and collaboration. As seen from that chapter, coordination problems were said to be problems where there are enough resources for everyone such that the exploitation needs to be managed. On the other hand, collaboration problems were said to be problems where the resources are not enough, such that the appropriation of a resource by one party directly affects how much the other party can have (Martin, 1992:770). The work of Peter Ashton (2003) is most helpful in illuminating the coordination problem. After a study of the current and projected water demand from all the riparian states, Ashton (2003:11) found that:

> Given that natural flows in the Okavango River have varied by between 10% and 45% of the mean annual flow (McCarthy *et al*., 2000), a decrease in mean annual flow of 3% [which is equal to most generous estimate of current and projected water needs] may not appear to be significant and, indeed, to be well within the "normal" range of variation in inflows.

This means that the riparian states would be able to implement their current water plans without an adverse drop in inflows. The issue of access to water is a pure coordination problem. This finding is an important one as access to water is the most contentious issue at the moment in the delta. Ashton (2003:11) is, however, cautious and sounds a warning immediately which leads us to the collaboration problems. He continues that:

> the absence of sufficient information regarding the scale, significance and resilience of ecosystem responses within the Okavango Delta to decreased inflows of this magnitude makes it extremely difficult to predict with any accuracy or certainty the likely scale of responses to a *sustained* decrease in inflow. [emphasis in original]

As far as water is involved, coordination is the problem confronted by the delta. When it comes to biodiversity maintenance, the delta is confronted with a collaboration problem. This is because unilateral actions by a riparian state, for example dam construction in the head waters or extensive irrigation would have important consequences for the rest of the delta. This might likely be less of a problem once sufficient information as regards the long term impacts of water abstraction becomes available. This points to the salience of information in sustaining the regime.

The kind of problems to be managed should ideally dictate the path of evolution of a regime. In this case, the OKACOM needs to develop institutions that can monitor use of the basin with regards to biodiversity maintenance. It also needs to develop enforcement mechanisms to ensure that this biodiversity remains viable.

3.6 Obstacles to Cooperation in the Okavango River Basin Commission

Cooperative arrangements are more likely to succeed if participants to a cooperating issue are able to build trust amongst themselves. Two important issues were acting as disincentives to cooperation in the delta. One issue, which will be dealt with first, has also been identified as an issue that makes cooperation much more difficult in Alam's (2002) study of transboundary river cooperation between India and Pakistan, and that is the existence of a bellicose situation.

3.6.1 Bellicosity between Botswana and Namibia

Namibia and Botswana were caught in a dispute with both projecting sovereign claim over the Kasikili/Sedudu[5] Island. The Kasikili/Sedudu Island is found in the Chobe-Linyati area, close to the Caprivi Strip in the north east of Botswana (Green Cross, n.d). It is claimed that both governments moved their troops to the area to reinforce their claims and that shots were fired. The dispute was referred to the International Court of Justice (ICJ) and settled in favour of Botswana (Green Cross, n.d). The fact that Namibia agrees to this settlement downplays the effect that this was likely to have had on the cooperation in water. It may be possible that anticipated cooperation in water might be responsible for Namibia's acceptance of this settlement. The other view, especially as postulated by Swatuk (2003), that the dispute seems to be settled only because no real national interests were negatively affected, is also possible.

3.6.2 Misinformation and threatened Livelihoods

In 1994/95 and 1995/96 rainfall season, Namibia experienced an extraordinary dry spell, which resulted in a poor run-off thereby reducing the amount of water stored for use. This kicked into action Namibia's plan of connecting the Eastern National Water Carrier (ENWC) system to the Okavango as an emergency project to supply the capital city, which at one point was left with only one month of water supply (Journeyman Pictures, 1997). The government of Namibia considers the Okavango River as an insurance policy against any unforeseen water shortages inland. This plan (of water abstraction) could not be implemented for several reasons, principal among them being the fact that the following rainy season produced enough water and removed the immediate need for the implementation of the emergency plan. Secondly, the government of Botswana objected to the plan, insisting that further and more detailed studies should be taken to determine the harm this project would do to the ecosystem (Mbaiwa, 2004:1322; Wormuth and Buffle, n.d:8). It is important to note that Botswana's interests, as we will see below, had now changed, favouring more the protection of the ecosystem as a driver for the burgeoning tourism

[5] Kasilili is the name of the island as it is called in Namibia, while Sedudu is the name of the same island as it is known in Botswana.

industry. While many commentators (Turton, 2003; Heyns, 2007) downplay this potential conflict, it is important to highlight that this brought to the fore the kind of emotions the issue of exploitation of the Okavango river arouses. The media is blamed for misinforming the public about the realities on the ground (Turton *et al*., 2002:12). As an example, having heard about Namibia's intention to abstract water from the Okavango River, the communities from Ngamiland, the district in which the Okavango Delta is situated, wrote a petition to the government of Botswana protesting against Namibia's intentions. They were protesting on the basis that abstraction would adversely affect their livelihoods downstream (Kgosi Tawana II, 1998). This was not helped by stories that were circulating in the media that Namibia had signed an agreement with Angola which specified what was to be done by the two states in the case of a confrontation with Botswana and what to do if South Africa were to come on the side of Botswana (The Namibia Economist, 29 September, 2006). The government of Namibia strongly refuted the allegations.

This disagreement is an example of conflicting priorities of the riparian states. While the priority of the Namibian government was water supply to the population, that of the Botswana government was the protection of the ecosystem for tourism. This is an issue that still poses challenges in the regime as reflected by the 2007 evaluation of USAID's assistance to the Commission. The report indicates that:

> as USAID negotiates program design and implementation agreements with its partners, it has found that biodiversity protection is currently a high priority for only one of the three countries (Botswana) (Andreini, 2007)

The report downplays this problem as a manageable one but admits that such problems have added complexity to project development and management (Andreini, *et al*., 2007). Attention has to be paid, however, to what lies beneath basic expressions of interest in order to unravel real problems. Botswana's change to ecosystem protection and opposition to Namibia's abstraction of water upstream, does not reflect a 'greening' on the Botswana government's side, - rather it is as a result of financial rewards realised from tourism as well as its failure to push through its own "Southern Okavango Integrated Management Project" which was meant to withdraw an amount of water from the delta (Swatuk, 2003).

3.6.3 Angolan Civil War and Current Angolan Government Posture

The Angolan civil war was generally a threat to cooperation in that while the country is the largest contributor of water to the entire basin system, it had neither time nor resources to fully dedicate to the negotiations and cooperation initiatives. As indicated earlier, the province in which

the Cuito and Cubango River rises belonged to the rebel UNITA group. The other states took a risk in negotiating with the MPLA as there was a certain level of probability that they could have been defeated. This could have derailed the cooperation and affected the relationship with the new powers for lack of trust of not cooperating with them when they were in control of the province.

The Angolan state is now at peace. As indicated earlier, there are competing priorities in order to kick-start the economy. Projects like the Okavango rely on the political will of the government in order to succeed. According to Swatuk (2003:130) "[i]t is no exaggeration to say that maintaining the health of the Okavango Delta is about as far away from Angolan government policy-making circles as an issue can get". This implies that even though the government might have provided commissioners to OKACOM, it does not consider this as a high priority issue. The discussion from the previous chapter about the level of leadership that takes part in agreements particularly applies to the case of Angolan participation. As pointed out by Swatuk (2003:135), Angolan state makers will be asking why they should not use the water of the Cubango or Cuito for that matter, when it is Botswana that is reaping the benefits from tourism. He also points out that as long as state representatives to these regimes are positioned in relatively powerless positions, reneging on the regime is always a possibility.

3.6.4 Language

As indicated earlier, English is an official language in two of the three cooperating countries, namely Botswana and Namibia. Angola's lingua franca is Portuguese. Heyns (2007b) has cited delays in translations between Portuguese and English as having been one of problems encountered in the cooperation initiative.

3.6.5 Diversity of Interests and the Logic of Development

The USAID report referred to above, highlights that differences have been observed in terms of priorities of the riparian states. This is the same observation that Muhamed (2003) made in his comparative assessment of the collaborative arrangements in the Limpopo and Orange River Basin. The USAID report has given the example of Namibia being concerned more with ensuring security of supply issues[6] i.e. the abstracting of water from the Okavango and the development of a hydro electricity power plant at Popa Falls, whereas Botswana is more concerned with the biodiversity of the delta as a priority. Namibia's interests fall within a larger 1950's logic of a 'mega project' development approach - for example irrigated cash crop agriculture, power plants, and producer-driven commodity chain production (Swatuk, 2003). Within the context of conservation, Namibia's logic of development becomes difficult to achieve because of actors operating in the Okavango who vehemently want to oppose particular development paths which in

[6] Turton discusses this at length in Turton (2003).

the African context is short of denying the right to develop for Africans. Ironically, these organisations come from and are funded by, developed countries. A discussion of these actors is covered on page 45 below.

The OKACOM agreement provides in Article 1.3 that parties to the agreement have to notify the commission of any proposed developments in the delta. The Government of Botswana however, unilaterally announced the Okavango delta as a Ramsar site (Swatuk, 2003). This rightly, according to Swatuk, left a bitter taste in the mouths of the other OKACOM partners as it went against the spirit of what OKACOM was set up for. This is an example of Botswana protecting its economic sovereignty especially as far as revenues from tourism are concerned. Botswana's benefits will continue flowing in for as long as the delta as an ecosystem is viable and this can be ensured and protected by becoming a signatory to the Ramsar convention. If this was not the motive, why did Botswana only become a signatory in 1997, when the Ramsar convention has been around since 1971? Swatuk (2003:129) makes a valid point when he asserts that:

> "[T]he fact remains – sovereign states keen on post war reconstruction and overcoming the development deficit are unlikely to take kindly to outside interference in their development efforts"

Many academics and experts on water would rather concentrate on the peace enforcing characteristics of international water cooperation, however, ignoring the equally present facet, conflict, which is after all the other side of the coin, is not going to make it disappear. It is apparent from the above discussion that there are underlying tensions among the cooperating states. The conflict dynamic needs to be taken into account in order to better understand the dynamic of cooperation.

3.7 Drivers for Cooperation

What therefore is driving the continued functioning of the regime? What can be identified as fuelling factors for continued cooperation within each of the riparian states? Swatuk (2003) identifies two factors, namely time and robustness of the delta as binding agents for continued cooperation. He argues that the delta is more resilient than it is currently thought to be. The complexity of the ecosystem makes it impossible to tell which changes have come about from human use of the delta. These changes have occurred over a long time. Time and delta robustness therefore, are two aspects that the cooperation still has in its favour. In addition, Swatuk (2003) points to the immense international interest, expertise and capital and other structures of cooperation like SADC, as push factors for cooperation. The role of external players will be covered under a separate section in this study. Meanwhile, the following pages will look at the driving factors for regime maintenance within each of the riparian states. In other words, what

makes cooperation worthwhile for each of states? These have been identified as new opportunities for growth in Angola, economic diversification in Botswana and population growth in Namibia.

3.7.1 Angola

In Angola, the government has an opportunity to resettle populations and kick-start development in the upper reaches of the Okavango Basin. This might involve the resettlement of hundreds of thousands of internally displaced persons (IDPs) and also the use of the rivers for hydro-electricity generation and irrigation.

After the independence of Angola, a civil war was waged in Angola for a total of 27 years. The result of the war has been the death and injuring of millions of Angolans, displacement and thousands of refugees in neighbouring countries (Porto and Clover, 2003: 67), notwithstanding the pervasive poverty and environmental problems as a result of the dislocation of communities and destructive effect of the war. Angola, despite its mineral wealth, is ranked number 162nd of the 177 countries on the Human Development Index (UNDP, 2008:232). Angola faces extreme challenges as it has to revitalize services in all sectors including health, education and transportation. It has some of the worst Human Development Indicators with the adult literacy rate at 32.6%, and a large percentage of children under weight for their age (31%) (UNDP, 2008:232).

The end of war did not mean that Angola started to correct these ills. There was need to consolidate the hard-won peace by implementing a series of measures that would ensure that the country did not have a false start like the 1992 peace (WFP, 2002). It therefore had to engage in the demilitarization and demobilization of forces as a priority (Porto and Clover, 2003:67). This is the time therefore that Angola, after consolidating the peace, will be working towards improving the lives of its people. Even though Angola is not thought to be a water poor country, there is a large population that lives in the catchments of the Cuito and Cubango rivers, which are the origins of the Okavango River. The water in this area is absolutely crucial for the rebuilding process and starting over in agricultural production and re-establishing livelihoods. According to Porto and Clover (2003:75), the province covers an area of 200 000 sq km and has some 140 000 inhabitants whose main livelihood system is based on agricultural production. Resettlement after the war meant that the population of the province was going to increase tremendously (Turton, 2002). The waters in this region therefore have strategic importance in kick-starting the rebuilding process.

Potential for hydro electricity and damming water for drinking are said to be considered. While Angola does not really need the cooperation of the other countries for its development, its activities will be crucial to the health of the ecosystem as well as the development potential of the other riparian states.

3.7.2 Botswana

The main driver for cooperation for Botswana is the bid to diversify its economy from relying on minerals, which are heavily affected by world market fluctuations, to more reliable sources of revenue. Tourism has been identified as one of the sectors which does contribute and has the potential to incrementally contribute to the economy. Agricultural diversification is also another source of economic diversification, however, as will be seen below, both greatly depend on the availability of water.

While Botswana has been hailed as a 'development miracle' (Africa Research, 2008), its development has been typified as mineral dependent (See Poteete, 2009). If an economy like Botswana is mineral dependent, it needs to ensure that it attains economic sustainability in order to ensure that development will continue even after the minerals run out or get vulnerable because of global markets. Economic sustainability as a concept is associated with the idea that national wealth is none decreasing over time (Hartwick, 1997; Pearce *et al*., 1989, Solow, 1974, 1986 cited in Lange and Wright, 2001:6). The government of Botswana has realized levels of income from minerals which have enabled it to increase its foreign reserves and it has been able to meet its national budget and development needs for the past 17 years without resorting to loans or public borrowing (Africa Monitor, 2009:1)

Mineral wealth, apart from running out at one point, is also affected by world markets. According to Mathe (2009), because minerals like diamonds are luxuries, they are the first to be cut out of consumer's budgets in response to unfavourable economic conditions. This is exactly what has happened with the demand for diamonds triggered by the housing sub-prime credit crisis in the United States (Mathe, 2009:10). According to Mathe (2009), this crisis has set off a domino effect which has gone as far as affecting the diamond market, which is expected to decline by 15% in 2009 (2009:40). Mathe (2009) continues that:

> Warning signs of hard times were seen on 30 October [2008] when DiamonEx received $20 per carat for 10 612 carats sold in its inaugural sale from the Lerala Mine. This was against the valuation of $48 per carat…Debswana…was unable to sell any diamonds in November [2008] and only recorded 'very low sales' in December [2008]…Of the 32.6 million carats produced by Debswana in 2008, only 28.9 million were sold by year end… [t]he company shut down for four weeks beginning in mid December [2008] as a cost cutting measure.

As a result of the underperforming markets, the government of Botswana has for the first time in 2009 failed to meet its budget and has negotiated a budget support loan from the African Development Bank amounting to US$1.5bn (Africa Monitor, 2009:1). It is also reported that the

country's foreign reserves have fallen from a peak of US$10.3bn in March 2008 to US$8.2bn in February 2009 (Africa Monitor, 2009, 5).

Botswana does not only produce diamonds. It also has other natural resources like copper-nickel and coal, however, income from diamonds far outweigh income from other minerals. Lange and Wright (2002:19) have calculated the total mineral wealth of Botswana from 1980/81 to 1997/98 in which they find that diamonds constantly contribute more than 94% of the total mineral wealth for all the years. Therefore, what happens with diamond marketing matters.

The government of Botswana has not been caught unaware by the situation. It has long been recognized that it cannot depend forever on its minerals for development as reflected in its National Development Plan (NDP) 8 (NDP 8). According to the Ministry of Works, Transport and Communication, "in the mid 1980's the mining sector constituted 50% of GDP, whereas in 1994, it constituted 36%". This is an indication that the government is diversifying its economy. This begs the question – diversifying into which areas?

Africa Research Bulletin (2008) gives two possible areas for diversification namely agriculture and tourism. In the agricultural sector, Botswana is well known for beef production for export to the European Union. However general agricultural production contributes a very small percentage to the GDP. Nevertheless, this is one area that the government is diversifying into, especially small holder farming, given that no serious advancement have been made in this sector (see Whiteside, 1997). Beef exports, especially to the European Union, remain an important part of the economy in Botswana. Beef exports make up the bulk of the 1.6% contribution of the agricultural sector to the GDP.

The second area for diversification is tourism. According to the Botswana Vision 2016 (Government of Botswana, 1996), tourism is one of the areas that hold further potential for development. This sector, according to Moswete (nd) is the second largest revenue earner after the mining sector; she also notes that 75% of the international tourists visited the Okavango Delta. Botswana has a huge advantage in this area because of the status of the Okavango Delta. According to Turton *et al.* (2003), the delta supports a key component of the country's burgeoning tourism industry, with a near pristine unique aquatic ecosystem internationalized as a Ramsar site.

One factor common to all Botswana's choices for economic development, starting with the main stay of the economy to the two possible areas for diversification is that they are heavily dependent on water. Beef production, the production of minerals and tourism, especially in Botswana, is heavily dependent on water. The main tourism area is the Okavango Delta, whose existence depends on the availability of water to maintain the viable ecosystem. Botswana has a

long history with water from which it has learned tough lessons which will remain part of the Batswana.

Dahl (1981) reported that at the time of independence, Botswana experienced one of the most severe droughts which had lasted for more than five years. Dahl (1981:1) reports that on the day of independence, 30th September 1966, the situation was described by the Transitional Plan of Social and Economic Development as follows:

> Botswana is now experiencing the most calamitous drought in living memory. Its end is not in sight…it is reliably estimated that the national herd has been reduced by over one third and that the losses in some areas has exceeded 50%. More particularly a whole year's crop of calves has been lost and it is calculated that it will need some five years for full recovery to take place…the present drought has brought with it famine, making one-fifth of the population dependent on international famine relief assistance…Heavy expenditure,…some 20% of the total recurrent budget and over 40% of the internally generated Government revenue – is being spent on drought and famine relief and rehabilitation measures (Dahl, 1981:1).

The experience Botswana had at independence was a tough one, one that is likely to remain part of the institutional set up. This experience had taught the government and people of Botswana to attach a much greater value and importance to water. The importance of water has been codified in the naming of the national currency – the pula – which literary means 'rain'. The Ministry of Works, Transport and Communication (2001:19), in its initial communication to the UN convention on Climate Change states that: "[w]ater is the scarcest resource in Botswana, affecting many aspects of the nation's development. Water conservation and demand management are key priorities in the National Water Master Plan." Whiteside (1997), in his report on encouraging family sector agriculture in Botswana, reports that "[w]ater is an overriding constraint in Botswana". Also in their study, Rahm *et al.* (2006: 158) note that: "Water resources are the most crucial of all environmental resources in Botswana…This is so because water use directly affects the utilization of all other major natural and economic resources".

Water therefore takes a central stage within the context of development in Botswana. Its scarcity acts both to incentivise Botswana to guard jealously any and all access it has to this precious resource while at the same time recognising that it is a downstream riparian, and therefore it seeks cooperation for sustainable use.

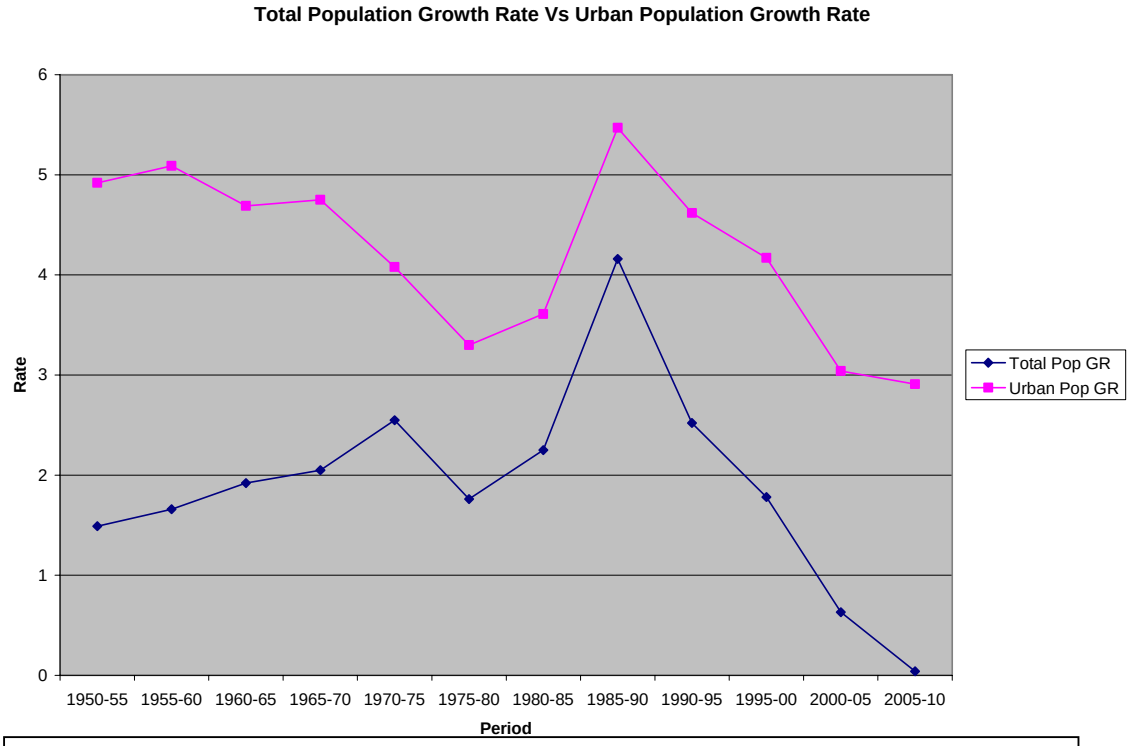
3.7.3 Namibia

The main driver for cooperation in Namibia is its population growth vis-à-vis available water resources. Namibian population density today is still considered one of the lowest on earth,

only second to Mongolia. It is estimated, for example, that in 2008, Malawi's population density was 139 persons per square kilometre (Malawi Government, 2009). Compare this with Namibia's population density in the same year of 2.4 persons per square kilometre (van Langenhove & Mufeti, 2008). Therefore, by all standards, Namibia is still very sparsely populated.

Population growth is a function of three important factors, namely fertility rate, mortality rate and migration. According to the government of Namibia, Namibia's fertility rate is among the highest on the continent. Namibia has a total fertility rate of 6.0, which is almost double as much as the world fertility rate of only 3.3 in 1990-95. The mortality rate has over the past decades declined owing to improvements in health, especially maternal and child health which has resulted in lower child mortality rates. The government reported that unless birth rates stabilize, the observed high rate of population growth will continue (Government of Namibia, 2002:7). The other factor that affects population as indicated earlier is migration. When net migration is positive, it leads to an increase in population, whereas if it is negative, it has the opposite effect on population growth. There are however two kinds of migration, internal migration, from one place to another within the territorial borders of the country, and international migration where one goes outside the country. Internal migration is an important factor in our discussion. Namibia has experienced a general population movement from rural areas to urban areas where people have moved to earn a living in the industries and service sector. This, combined with the natural rate of growth, has led the population in urban centres to grow at a very high rate, far exceeding the national population growth rate.

The chart below shows the two rates of growth from 1950-55 to 2005-10 periods. As can be seen, the urban population has grown at a constantly higher rate than the total population growth rate. This means that there is a high rate of urbanization in the urban centres of Namibia, one of which is Windhoek, the capital city, with the highest population of all the urban centres. A higher rate of urbanization means that services also have to grow at the same rate in order to meet the demands of the growing population. One of these services is the need for water and sanitation.



Graph constructed using data from the Population Reference Bureau (http://www.prb.org/Countries/Namibia.aspx.)

Figure 4: Graph showing the Urban and Rural Population Growth Rates in Namibia

Increase in population means increased investment in services designed to meet the needs of the population. This is a major problem that Namibia has had to deal with, especially with supplying water to the nation's capital, Windhoek. A study commissioned to assess water use and availability in the city found that Windhoek was using much more water than was sustainable, evidenced by the lowering of the water table (Hellmuth, 2000:56). Rainfall over Namibia is typically characterized as low and variable and falls in short intense episodes so that infiltration is often very low (Jansson, 1991; Brown 1992; and Byers, 1997 cited in Wardell-Johnson, 2000:19).

This very driver for cooperation might, however, turn into a potential spoiler. As can be seen throughout the case study, Namibia has always taken the leading role in all initiatives. This comes out of the perceived situation in which it considers itself to be, and that is a water scarce situation. Hasler (n.d. 6) contends that

> it is conceivable that these institutions and organizations [encouraging cooperation] will be ignored if strong political will exists to extract water, no matter what the political risks or social and environmental cost. This is the *real politic of* international hydro politics. [emphasis in original]

It is however on this same political will that cooperation has so far persisted. Perhaps Namibia should pay more attention to those advisors that indicate the situation is not as dire as the government believes it is. Davis (2000) is one such advisor, who argues that the scarcity of water

in Namibia is overrated. Davis (2002) argues that if water is the scarcest resource, then it should be priced highly, but in the case of Namibia, it is not, and if it is not, then perhaps it is not such an important constraint to development as we are meant to believe. Davis (2000:70) also confronts the practical examples which show that water is not as scarce a commodity as shown by the practice of giving huge subsidies to the most profligate water users and then decrying their inclination to waste water, the failure to price water appropriately and the protectiveness shown toward heavy users such as irrigators. According to him, this is an irrational use of water which indicates that water is not a scarce commodity. While this discussion does not refute Davis's inclination, it is important to recognise that those "profligate" water users are the people that have power in society as well and therefore determine the distribution of resources as part of the power they hold.

3.8 Role Played by Other Actors in the Okavango River Basin Commission

While the member states have contributed much to the success and or progress of the Okavango River Basin Commission, it would be erroneous to attribute the entire accolades to them. Other actors have played an important role in propelling or further articulating the functions of the commission. Other actors can be broadly grouped into three main groups as Donor Agencies, NGOs/Civil Society and Academia. This section will now review the role played by each of the groups.

3.8.1 Donor Agencies

The United States Aid for International Development (USAID), Southern African Regional office, is one of the main donors that have been instrumental in the Okavango Basin. USAID has been providing assistance to OKACOM through a project called "Okavango Integrated River Basin Management project" (IRBM). This project comes out of the 2003 mission strategy document covering the period 2004 – 2010, in which a large part of finances have been dedicated to the Okavango (Andreini *et al.*, 2007). The project is implemented through a US based Consultant – ARD Inc[7].

The USAID Mission provided interim secretariat services for OKACOM from 2006 until its hand over in 2007. The transfer to OKACOM was made possible with funding from the Swedish International Development Cooperation Agency (SIDA). Apart from the assistance with establishing the secretariat, the USAID project has been working in three areas as follows:

a) Strengthening OKACOM member states

[7] ARD is a wholly owned subsidiary of Tetra Tech, a leading provider of consulting, engineering, and technical services worldwide.

b) Information management for improved decision making and,

c) Community participation

In the 2004, 2005 and 2006, the project budget was US$2.5m, US$2.3m and US$2.2m respectively. In addition to the activities specifically focussing on the OKACOM, the mission has been building the capacity of personnel working in conservation in the delta (Andreini *et al.*, 2007).

SIDA has also actively supported the evolution of OKACOM. After the establishment of the Secretariat, SIDA provided the initial funding for the secretariat activities for the first three years to the tune of US$2.2 million (IRBM, 2005). The agreement for the funding was signed at the 13th Annual meeting of OKACOM in Maun, Botswana (IRBM, 2005). SIDA continues to cooperate with the commission through other projects, mainly through the "Every River Has its People" project.

The Global Environmental Facility (GEF) funded the initial Transboundary Diagnostic Analysis survey carried out by the Commission. Even though this was not properly concluded, the commission and the delta have continued benefiting from GEF though several projects, one of which being the "Regional (Angola, Botswana and Namibia) Environmental protection and Sustainable management of the Okavango River Basin". The GEF contributed over US$5 million to this project (Project Document, 2000). The Global Environmental Facility is a fund that was set up as one of the mechanisms through which funding can be provided to counteract the effects of climate change. It is part of the United Nations Framework Convention on Climate Change (UNFCCC).

The German Federal Ministry for Economic and Development Cooperation (BMZ) is active in the delta through the programme "Transboundary Water Management in SADC" , implemented by the German Development Cooperation (GTZ). The aim of the SADC-wide programme is to strengthen the human and institutional capacities for sustainable management of water resources (Meinier, 2009). The Okavango River Basin has benefitted from GTZ, especially from its sub regional project targeting mainly capacity building for information production.

3.8.2 NGO/Civil Society/IGOs

The Okavango Delta is protected under the Ramsar convention as a world heritage site. The importance placed on the delta internationally has seen several international nongovernmental organisations and intergovernmental organisations establishing projects in the delta with conservation as a central objective. The number of environmental NGOs, both international and local, operating in the delta is large such that it would not be possible to profile each and every

one of them here. It is important however to mention the existence of larger institutions like Green Cross and the International Union for the Conservation of Nature (IUCN).

Green Cross funded a large international programme called "Water for Peace" in which it worked in several international basins. The Okavango was one of the basins chosen. In the project, Green Cross encouraged interaction between OKACOM, as the official representative of the three riparian states, academia and civil society. One result of the project was the production of a book titled "Transboundary Rivers, Sovereignty and Development – Hydropolitical drivers in the Okavango River Basin" (Turton *et al.*, 2003). This book is a collection of essays on the Okavango delta and contains valuable information which in itself is a step towards advancing peaceful cooperation in the delta as it is a way of constructively debating contentious issues in the open. Additionally, the book makes information available for decision making. Information production is a core activity of OKACOM.

With funding from the Japanese government, the Green Cross "Water for Peace Project" aimed at encouraging debate among stake holders to find practical solutions which can contribute to solving wider transboundary problems. According to Green Cross (2003), the project was lending support to the river basin organization, which was aimed at enhancing the existing co-operation process by linking OKACOM with the scientific, expert and civil society communities to help develop an integrated basin plan. The project focused on the problem that the basin was lacking an agreement to regulate the equitable sharing of the benefits derived from the resources of the basin.

The International Union for the Conservation of Nature has been operating in Botswana since 1984. It is a union of governments, state agencies, NGOs and scientists working in the area of conservation. Apart from the main projects it is involved in, in Botswana, the IUCN plays a big role in the Okavango Delta Management Plan (ODMP) under the lead of the government of Botswana. The aim of the project is to apply the ecosystem approach through integration and participatory approach in planning (IUCN, 2006)

3.8.3 Academia

Universities, research centres and think-tanks are playing a very important role, that of generating information for use by policy makers and conservationists in the Okavango. The "Water for Peace" programme that was being implemented by the Green Cross International had the African Water Issues Research Unit (AWIRU), a research unit at the University of Pretoria, as a main cooperating partner. The Harry Oppenheimer Okavango Research Centre (HOORC), a centre affiliated to the University of Botswana specialises on natural resources management research (HOORC, 2009). It is staffed with expertise in the various technical fields including

political ecology, cultural heritage and tourism, remote sensing, physical geography, hydrology and many other specialisations. In the search for local solutions for local problems, the universities and centres are indispensable. Academics like Peter Ashton have helped clarify questions around what equitable sharing of resources (water) would entail in the delta (Ashton, 2003).

3.8.4 The Role Of Other Actors Revisited

How does the role of these external actors affect maintenance of a regime? As can be seen, there is obviously to a very large degree a positive influence as pertains the maintenance of the regime. These external actors have provided the much-needed financial and technical resources to produce information vital for maintenance of the regime. The number, of these actors however might be a cause for worry. It has to be admitted that while they are all interested in conservation, most of them sometimes rely on the same sources of funding. This might create some kind of competition among the conservationists. The multiplicity of actors also leads to competition for visibility. The tactics involved in order to achieve this have not always been helpful. At times, the objectives of these organizations and those of the governments with which they are supposed to work have been at loggerheads. These organizations have, at times undermined national decision-making power by asserting that international interests have preponderance over national interests (Ashton and Neal, 2005:13). This is tantamount to undermining national sovereignty of the member states of the OKACOM. These conservation agencies have used the media as their information outlet, issuing press releases and statements. Swatuk (2003) points out that communication is a problem in the delta and that the release of parallel-unsubstantiated information adds to the already existing challenges. In his critique of the media and other external actors, Swatuk points out that, "[m]edia sensationalism and the arrogant, know-it-all approaches taken by conservation organisations, like the International Rivers Network (IRN), do more damage than good" (2003:130).

3.9 Problem Solving, Compromises and Cooperation

Problem solving is an aspect for which regimes are built. If there were no problems in cooperation, there would be no need for regimes. Problems in transboundary regimes can be defined as incompatible positions about an issue. For cooperation to occur, these incompatible positions have to change their basic characteristics to become compatible. This might involve renegotiation of interests held by one party in relation to the issue concerned. This section will analyse the process of problem solving and compromises in the Okavango river basin. Given the evidence in the case study, it can be argued here that the regime has since its creation not demonstrated instances where it has solved cooperation problems in the delta.

It was observed earlier that all the countries in the Okavango Basin have planned projects for implementation on the river. Namibia, apart from abstracting water to connect to the Eastern National Water Carrier scheme, is planning to use the Okavango for irrigation and electricity generation. Botswana had earlier planned to develop a Southern Okavango Water Supply project (Heyns 2003:17) and is currently using the delta for revenue generation through tourism. The colonial government of Angola had plans for using the upper reaches of the Okavango River for electricity generation and irrigation. Indications are that these plans have been adopted by the government of Angola (Pinheiro, *et al.* cited in Mbaiwa, 2004:1322).

Of these projects, the Namibian plan to abstract water from the Okavango River has been the most contested. The Botswana government demanded that a detailed investigation be done, which led to the postponement of the Namibian plans. Postponement seems to have been the most common form of comprise in the delta. All the planned projects mentioned above have been postponed as opposed to being permanently discarded for better, more cooperative, plans. This means that these compromises are temporary in nature. As a case in point, the Namibian government believes that the Okavango River is insurance for water supply to the interior, the temporary suspension of the project is exactly that – temporary. It will in future use the water from the Okavango. Heyns (personal communication) argues that negotiations have been helpful in managing conflict[8] in the delta; however, postponing projects can hardly be considered as a solution. Heyns (2003:17) has emphatically stated that Namibia will have to augment the supply of ENWC by 2005 and not later than 2009.

3.10 Strategic Considerations, Regime Design and Operation

The central argument in this study is that states design regimes to protect their sovereignty. From this case study, this section aims to isolate instances where states acted to protect their sovereignty. These instances can be identified both at the design level as well as at the operation level of the regime. At the design stage, the role taken by Namibia throughout the process of regime formation is an example of state influence of regimes to protect their sovereignty. At the regime operation stage, Botswana's declaration of a Ramsar site without consulting member states of the basin is another example. These examples will now be discussed in detail starting with the case of Namibia.

[8] Conflict here is used to mean "differing points of view"

3.10.1 Namibia - Need to 'Ensure Security of Supply'

Instances where the Namibian government aimed to ensure its sovereignty remained intact can be identified on two occasions. Firstly, a review of the case study shows that Namibia has been prominently pushing through the idea of cooperation in the delta. It was the country that first moved upon independence to revitalise cooperation made with the Angolan government over the Cunene River. This action allowed the Namibian government to ensure sustained use of and access to the Cunene River. It also entered into a treaty with the government of Botswana to ensure there was cooperation over the Okavango delta. Namibia did this because it realised the fact that without the cooperation of these two governments, it would be impossible for it to tap into these sources of water (Heyns, personal communication). The government is, and has been since before independence on a hydraulic mission. As mentioned earlier, a hydraulic mission is a situation where a country seeks to mobilise water resources for economic and social development. This can also simply be called 'ensuring security of supply' (Turton, 2003:86). The situation in which Namibia is, i.e. its aridity and perceived water scarcity, facilitates an equation of access to water with national security. Realising that the 'security of supply' cannot be ensured without getting into a confrontation with its neighbours, it engaged itself in the process of regime formation as a first step.

Secondly, it was important that the resulting regime be supportive of the hydraulic mission and not act as a hindrance. Firstly, in the articles prescribing the functions of the commission, Article 4 subsection 6, under the function of the commission, it specifically spells that the commission will advise on:

> Measures that can be implemented by any one or all the contracting parties to alleviate short term difficulties resulting from water shortages in the Okavango River Basin, during periods of drought, taking into consideration the availability of stored water and the water requirement within the territories of the respective parties at that time (Treaty, 1994).

It is clear that this clause was included given the situation that Namibia was in. The Water Master Plan of the country is using the Okavango as an insurance for a source of water should there be need to augment the available water (Turton, 2003). The hydraulic mission of the country includes the development of a pipeline system called the Eastern National Water Carrier mentioned earlier. The pipeline, to be built from the Okavango is meant to feed into this system. Secondly, the commission by design is an advisory body, which means that while it can and rightly acts as a source of information which reduces uncertainty among the members of the regime, thereby reducing transactional costs, it does not have any mandate to reinforce whatever advice it gives to the members. Therefore, in principle, a member state can decide to contravene

the advice of the commission if it felt compelled to. This gives Namibia pathways through which it will achieve its hydraulic mission and by extension, protect its national security and sovereignty.

3.10.2 Botswana – Greening or Economic Interests?

As has been reviewed in this case study, Namibia was forced to operationalise its plans of abstracting water from the Okavango River to feed into the Eastern National Water Carrier around 1996. Even though a study was carried out to show that Namibia would be abstracting less than 1% of the water, Botswana still insisted that a bigger study be instituted to show the effect that this abstraction would cause on the ecosystem of the delta. As a result, and as a matter of compromise, Namibia shelved the plans. As discussed above in section 3.6.2, Botswana unilaterally submitted to declare the Okavango Delta as a Ramsar Convention site and became a party to the convention in April 1997 (Swatuk, 2003:127). This has to be interpreted as a direct response to Namibia's need to utilise water in the Okavango (Swatuk, 2003:17). First, as a lower-stream riparian, Botswana has no leverage over other members with which to incentivise cooperation. Therefore, by internationalising the Okavango Delta by declaring it a Ramsar site, the playing field becomes larger than the basin. It invites other international environmental players who would carefully monitor the activities of the other riparian states to ensure that the integrity of the delta is not compromised. Secondly, Namibia, as a signatory to the Ramsar convention, is bound to ensure that it does not carry out any development on the river which will jeopardise the site. It has been argued that Botswana did this in order to protect the revenues that it has been getting through tourism and that it is not necessarily a genuine change of policy on the part of the government (Swatuk, 2003). This has been justified by the fact that the Botswana government had over a quarter of a century in which it could have declared the delta a Ramsar site and it only chose to do it in 1997, a year after expressing objections on Namibia's proposed abstraction of water from the Okavango. These instances show that in entering cooperation regimes, the consideration is on protecting state viability, the ability of a state to make decisions that will enable it to harness resources to provide for its people. This is the mark of sovereignty.

3.11 Impact of Strategic Considerations – A Rationalist Regime theory perspective

Both neorealist and neoliberal institutionalists agree on the assumptions that states are the ones responsible for the establishment of regimes and also that they are rational unitary actors (see page 7). This approach seems to hold explanatory power as all that has happened so far can be explained as activities of rational states protecting their interests. Using this approach, we can also anticipate the path of evolution of cooperation in the delta.

Until a detailed study can be done to demonstrate the possible effects of Namibia's plans of abstracting water, developing a hydro-electricity generating station and irrigation of 50 000ha of land, these plans will remain exactly what they are - plans. This will be like that, as mentioned above, because of its responsibilities under the Ramsar Convention and other conventions like the UN Convention on Non Navigational Uses of Transboundary Rivers. This means that Namibia will not be able to benefit from cooperating in the delta.

As far as Angola is concerned, it has been indicated that any likely action to develop water infrastructure like power generation, irrigation or abstraction for domestic use is likely to be strongly objected by powerful international organisations as a result of the international nature of the delta (Ashton and Neal, 2005:13). This also means that Angola will lose the ability to benefit from a regime which already offers minimal incentives. According to Keohane, a regime will exist for as long as those that are members in it can gain positively from participating in the regime (Keohane, 1985:167). From the above, it can be concluded that if the schedule of benefits does not change, the regime risks breaking apart. Ashton and Neal (2005:4) cite other studies that have reached the same conclusions including Ohlsson, 1995; Ali, 1996; Shela, 1996; Ramberg, 1997; and Turton, 1999.

3.12 Conclusion

This chapter has explored the process of regime formation and maintenance in the Okavango delta. On the persistence of Namibia, two separate Joint Technical Commissions were merged into one dealing with one common river basin – the Okavango river basin. Motivating factors for regime formation were seen to have been the desire for bridging a development deficit which would be made through the abstraction and development of a hydro electric generating station for Namibia, the potential of the delta for tourism for Botswana and the potential that the land and water hold for kick-starting development in Angola.

Obstacles to regime maintenance also existed and still do exist. A history of bellicosity between Namibia and Botswana as well as the lack of interest in the policy making cycles of the Angolan government are some of the challenges. Critical views point to the opposition that upstream riparian states like Namibia and Angola might face in developing the Okavango River mainly from the conservation organisations and the unfair benefit that accrues to Botswana as a result of the proscription. This is likely going to be a major test for regime maintenance if not mediated properly. As it stands, regime maintenance seems possible if the question of benefit sharing is going to be addressed rather than equitable use.

The chapter has demonstrated that states use regimes to protect their sovereignty. This has been shown by the actions of both the Namibian and Botswana government pursuing their

objectives namely the hydraulic mission for Namibia and economic possibilities from tourism for Botswana. The pursuing of states' interests has relegated the regime to the role of a tool among other tools (in this case other regimes like the Ramsar Convention) with which it uses in the process of protecting this sovereignty.

Taking a rationalist regime theory perspective, it becomes difficult to see how the regime is being maintained given the huge differences in benefits derived from the regime. From this perspective, regime maintenance has to come from a source other than benefits.

CHAPTER FOUR: CONCLUSIONS

4.1 Introduction

This chapter will conclude the discussion that has taken place in the preceding chapters. The first two chapters laid the groundwork to the discussion and tackled introductory questions, theoretical grounding and review of the gaps in the literature. Chapter three was the case study, which looked at the process of cooperation in the Okavango River Basin, mainly by examining the formation and functioning of the Okavango River Basin Commission which is meant to advise the member states on the appropriate use of the water resources in the delta. The main findings of chapter three were that states use regimes for their own ends. These ends centre on the protection of their sovereignty. However, this is true for two of the actors in the case study, namely Botswana and Namibia, while it is not apparent in the case of Angola. In Angola's case, evidence suggests that the cost of cooperation is still very low hence its continued participation in the regime. This chapter will then conclude the discussion by first of all looking at how the strategic considerations have affected the structure of cooperation in the delta. It will also review some of the lessons learnt throughout the discussion.

4.2 Strategic Considerations and Structure of Cooperation

It has been shown in this study that states take into consideration their national sovereignty in cooperative agreements, especially how these cooperative agreements alter their chances of protecting their sovereignty. This is in line with Watson's (2005:23) assertion that

> The state is the archetypal actor within the international economy, and every state will approach the process of negotiating international economics treaties from a perspective of defending its economic sovereignty.

If this is the case, then how is the structure of cooperation affected? What does this mean in terms of the importance of regimes? In order to tackle this effectively, it is important to have a common understanding of the meaning of structure. Structure, as used in this sense refers to the organisational form that is a manifestation of the cooperative agreements among the member states. In this case, it refers to OKACOM. Stated differently, how do the strategic considerations affect the ability of OKACOM to become an effective medium for cooperation among basin states?

One would have to say that its ability is adversely affected. First, as a result of strategic considerations, OKACOM does not have any real power to make binding decisions which can be

enforced. This is because it simply has not been given any such powers. This was built in at the design stage when it was designated as an advisory body. Secondly, even if it had the power to make binding decisions, it has no enforcement mechanisms (Turton, 2003:94). This is the case even against the background of the SADC protocol recommending that river basin organisations formed should have the ability to monitor compliance (SADC Protocol, 1995). This is a general fate that environmental and other regimes face, and that is the inability of states to accept hierarchical enforcement (Keohane, 1989:167).

What does this say about the usefulness of regimes? Are regimes really necessary? As can be seen in the case study, regimes have been used like pieces on a chessboard. The aim seems to be to outplay 'opponents' who are, in the liberal sense, cooperating partners, into some kind of untenable situation from which they cannot untangle themselves. This is evident in the case of Botswana's unilateral declaration of the Ramsar site, as well as the two states (Namibia and Botswana) calling upon the International Court of Justice (ICJ) to arbitrate in their boundary dispute. This is not to say that regimes are not important. One undeniable fact is that states will not engage in cooperative arrangements if they do not find them beneficial. In this regard, regimes are beneficial in as far as they allow the retention and circulation of information among cooperating members. This is important as it eliminates decision making within member states in a situation of complete imperfect information. This in turn lowers transactional costs on the part of states. This means that regimes are important in lowering transactional costs for states.

Secondly, regimes play an important role in deflating tensions. It provides a forum for continued interaction of member states. Regimes have the 'duck on a pond' effect. Above the surface, it is calm, collected, and peaceful and moving systematically, however, below the surface, it is paddling, heavily and fiercely. This paddling is responsible for regime evolution. In human societies it could be likened to deliberative interaction where dialogue has to continuously occur in order to move forward. The health of a regime depends on the nature and form of deliberative dialogue that goes on.

4.3 Lessons Learned

4.3.1 Regime Theory and Regime Evolution

Using the rationalist approach to regime theory, it was possible to anticipate evolution of the regime. For instance, it was concluded that if the benefit sharing as an approach is not adopted in the delta, the regime risks breaking apart because the benefits are currently very unevenly shared. While regime theory from a rationalist perspective helps us understand or expect a path of evolution to be followed resulting from the combinations of rewards derived from the regime, its

explanation of the driving forces for cooperation especially from Angola's side does not seem adequate. For instance, a rationalist approach will evoke the need for Angola to maintain its reputation as a good neighbour (Keohane, 1989:168). It does not state, however, whether this is a sufficient motivation in the long run and under what conditions this will be true. Alternative views have pointed at the fact that Angola has very little at stake in the Cuito/Cubango region as no real settlement has taken place yet (Swatuk, personal communication). Should we, therefore expect that the situation will change once the resettlement process begins? A cautious approach to answering this question is important. Currently, the cost of cooperation for Angola is very low. As discussed in chapter two, this in itself is an incentive to continue cooperating. However, should costs of cooperation rise, the dynamic of cooperation will be tested.

4.3.2 The debate between Neorealism and Neoliberal Institutionalism

The case study explored in chapter three seems to support the neorealists' conception of regime theory with regards to two issues namely, on the impact of regimes on world order and secondly, the debate between absolute and relative gains.

Neorealists object to regimes as important players in maintaining world order. They contend instead that world order depends on the foundations on which regimes are built (Little, 2008:299). This is largely true in the case study explored here. I argue that the foundations referred to by Little (2008) above are conventions, with which Keohane agrees when he postulates that conventions precede regimes and international organisations, as according to him, states would not be able to understand each other's actions in the absence of conventions (Keohane, 1989:4). This is further evidenced by the fact that the study has arrived at the conclusion it has, namely that regimes are used like pieces on a chessboard.

In the debate on absolute versus relative gains, the case study clearly portrays that the behaviour exhibited by Botswana and Namibia follows the relative gains logic. The focus is for example on what the states will lose, i.e. tourism revenue in the case of Botswana, while Namibia will have access to the water.

4.3.3 Regime Power Play

Continuing with the metaphor of a chessboard used earlier, it was seen in the case study that different regimes can act as different pieces on a chessboard with varying degrees of importance. This allows the use of regimes for or against other regimes depending on who is playing which piece. This was manifested in how Botswana used the Ramsar Convention to restrict, by, implication, the use of water resources in the Okavango Delta. The Ramsar

Convention by virtue of being a global convention has more supporters than the regionally specific Okavango treaty. The Ramsar Convention, being a global treaty, forms part of the sources of international law, and constitute, therefore, a basis on which Botswana can preclude the use of resources in the Okavango Basin by other riparian states. By internationalising the Okavango delta, Botswana has managed to expand its own power, at least temporarily. It has gained the ability, through the use of regimes, to balance its power with that of Namibia, which was mostly shown in the formative stages of the regime. Namibia displayed this power through agency, pioneering every cooperative engagement it was involved in.

4.3.4 Hydropolitical Complex Thesis

The case study reviewed in this study seems to support the existence of a hydropolitical complex. Both Botswana and Namibia are considered as pivotal states. A *pivotal state* is defined as one that is relatively economically advanced and tends to be in a drier geographical area such that it depends to a greater extent on internationally shared rivers as strategic sources of water. According to Turton, countries that fall in this category include South Africa, Botswana, Namibia and Zimbabwe (Turton, 2005:16). In our case study, both Botswana and Namibia are relatively more developed when compared to Angola. This could be one explanation for the low-profile role that has been taken by Angola. The case study supports the existence of a hydropolitical complex because issues of 'security of supply' for Namibia cannot be resolved without a subsequent solution for Botswana's desire to maintain tourism in the Okavango Delta. This is the defining characteristic of a hydropolitical complex. The fact that there have been no compromises in the delta points to the status of both riparian states of being pivotal states.

4.3.5 Continuous Evolution

Another important lesson that can be learned from this study is that evolution has to be an integral part of a regime. Evolution allows the regime to recreate itself in order for it to remain relevant in tackling cooperation issues. For any kind of cooperation, compromises are an essential part as they allow opposing views to be brought in harmony in order for cooperation to thrive. Conflict is an integral part of that process. This is not really epitomised in the Okavango Basin as there has been no real comprises in the delta (Scudder, 2003:1). This makes the evolution of the regime even more important. The process of evolution will preoccupy the cooperation initiative with new issues to avoid reaching a deadlock on the old ones. Currently, the role of foreign NGOs is important as it allows the implementation of programmes under the patronage of OKACOM which in turn gives OKACOM relevance.

4.4. Conclusion and Suggestions for Further Research

OKACOM is a cooperative organisation which seems to thrive in the absence of concessions or compromises. Compromises provide a way for cooperation to evolve. In the case of OKACOM, the postponement of interests has allowed cooperation to continue, which is atypical of cooperative arrangements. This suggests that cooperation in the regime is driven by other factors and/or actors than the three member states of OKACOM. These actors could be the international and national NGOs involved in conservation of the Okavango. They could also be the governments affiliated to these organisations considering that these governments provide sponsorship to these organisations. A third possibility lies in the need for states to maintain their reputation.

The suggestion that external actors are the drivers of cooperation in the delta would be more on par with the current situation of many African governments that are tied to conditionalities that come with aid. Further investigation will be required to better understanding the situation.

Botswana has effectively used regimes in order to enhance its position vis-a-vis other states access to the resources of the delta. Of importance for further research would be the extent to the which Botswana will go in playing this game. As has been emphatically put down by Namibia, water abstraction is not negotiable; strategies to ensure this happens will be incisive to policy makers, scholars and above all, the human security in the Okavango region.

Appendix A: The Permanent Okavango River Basin Commission (OKACOM) – A Review of the Agreement

The OKACOM agreement is a relatively simple and non complicated document (Heyns, 2007b:155). It has 8 sections – a preamble and seven articles (Treaty, 1994). The preamble recognises the importance of maintaining good neighbourliness and also the existing and emerging developmental programmes within the Okavango basin and their impact on the environment. It also accepts

> the concepts of environmentally sound natural resource management sustainable development and the equitable utilization of shared water course systems as reflected in relevant provision of agenda 21 of the United Nations Conference on Environment and Development held at Rio de Janeiro in June 1992… [and]… the Helsinki Rules on the use of waters of International rivers as approved by the 52nd conference of the International Law Association (Treaty, 1994).

Citing these two sources, means that the OKACOM accepts the principles implied under these provisions. The Helsinki Rules also cover the issue of fair and equitable utilisation of water resources. What does this exactly mean in the case of the Okavango?

Article one of the OKACOM agreement deals with the establishment of a Permanent Okavango River Basin Commission to be maintained by the three states. The main objective of the commission is to act as a technical advisor to the three states on "matters relating to the conservation, development and utilisation of water resources of common interest…and shall perform such other functions pertaining to the development and utilisation of such resources" (Treaty, 1994). This article also puts upon the member states to the agreement the responsibility of informing other members of any planned development projects in the Okavango Basin (Treaty, 1994).

The second article of the agreement deals with the composition of the commission. The treaty provides for the commission to be made up of three delegations, one from each of the member countries, with each delegation having up to three members appointed by the member state. Considering that the commission will be dealing with issues of a multi-disciplinary nature, the head of delegation from each of the member states is allowed to appoint any person, as a co-opted member, to advise the commissioners. The number of co-opted members that can attend a meeting at any one time is limited to three. This means that there are 9 core commissioners from

the three states. A meeting with a maximum number of co-opted advisors will have a total of 18 people.

The third article stipulates the procedure for meetings. The agreement stipulates that the commission will meet at least once in a year with more frequent meetings as the need arises. Article 3.5 details the decision making process as follows:

> All the decision of the commission shall be taken on the basis of consensus between the delegations, but in the event that the commission fails to reach consensus, the matter under discussion shall be referred to contracting parties by the respective delegations for further negotiations (Treaty, 1994).

This article as it stands, and in the light of the objective of its establishment, gives all and takes all at the same time. The commission is supposed to be a technical advisor to the contracting parties as provided for in the first article. However if it cannot reach a consensus on a matter being discussed, the matter is referred to the contracting parties for further negotiation. Technical advice implies value free judgement based on scientific evidence available at that specific time, unless if the issue being discussed has nothing to do with technical advice, in which case this implies that the commission takes much more responsibility than simply advising the contracting parties. It also takes the front of a contracting party and negotiates interests on behalf of a contracting party.

The fourth article deals with the advisory functions of the commission. The treaty lists 6 functions which have been reproduced here (Treaty, 1994). It will advise on:

a) Measures and arrangements to determine the long term safe yield of water available from all potential water resources in the Okavango River Basin;
b) The reasonable demand of water from consumers in the Okavango River Basin;
c) The criteria to be adopted in the conservation, equitable allocation and sustainable use of water resources in the Okavango River Basin;
d) The investigations, separately or jointly by the contracting parties relating to the development of any water resources in the Okavango River Basin, including the construction, operation and maintenance of any water works in connection herewith;
e) The prevention of pollution of water resources and the control of aquatic weeds in the Okavango River Basin;
f) Measures that can be implemented by any one of the contracting parties to alleviate short term difficulties resulting from water shortages in the Okavango River Basin during

periods of drought taking into consideration the availability of stored water and the water requirements within the territories of the respective parties at that time.

Article five relates to the powers granted to the commission. These are in relation to the carrying out of its advisory functions like the independent appointing of consultants to carry out work on behalf of the commissioners. Article six details the financial arrangements. Generally, the agreements provides for member states to meet costs associated with their commissioners carrying out duties for the commission. It also provides for the equitable sharing of other costs among the three states. Article seven contains the concluding articles. This article also provides for disputes arising to be settled by the member states.

Considering the agreement in its entirety, one sees that it hinges heavily on the availability and dissemination of information. For instance, in order for the commission to act as credible advisors to their governments, they need to base their advice on well founded research. Research activities, especially environmental research can sometimes be expensive depending on the methodologies used. Other studies use satellite imagery as aids for generating information, or the use of proprietary software for data analysis and scenario building, all which come with huge price tags.[9] This therefore means that the commission needs to be well resourced in order to competently advise the member states. A a result of the heavy financial requirements the commission may actually end up being dependent on the external funding and the motives of the sources of those funds. A second observation, un-related to the first is the ambiguity of terms which have not been defined. As an example, article 3.5 dealing with the functions of the commission, details that the commission will advise members states on "the reasonable demand of water from consumers in the Okavango River Basin" (Treaty, 1994). In this case, what are reasonable demands?

[9] *A study by Dominic Kniveton, Russell Layberry, Lotta Andersson , Thomas Gumbricht, Denis Hughes, Susan Ringrose, Hubert Savenije, Martin Todd, Julie Wilk, Piotr Wolsk titled "Satellite based rainfall data and flooding over the Okavango River Basin in Southern Africa." is an example of such studies.*

Appendix B: Time line of Major Water events in Southern Africa

Year	*Event*
1926	South Africa and Portugal (Angola) agreed that South West Africa (Namibia) had the right to the lower half of the Cunene River. This was the First Water Use Agreement (Heyns, 2003:10)
1964	Second Water Use Agreement between South Africa (South West Africa – Namibia) and the Portugal (Angola and Mozambique) on rivers of mutual interest which included in addition to the Cunene, the Cuvelai and the Kavango (Okavango) River and other rivers such as the Incomati and Maputo. (Heyns, 2003:10)
1967	Kingdom of Swaziland acceded to the 1964 Agreement above (Heyns, 2003:10).
1968	Agreement between South Africa and Portugal on the Cahora Bassa Project on the Zambezi River (Turton, 2005:6)
1969	Third Water Use Agreement establishing the Permanent Joint Technical Commission between South West Africa (Namibia) and Angola (Heyns, 2003:10)
1978	Lesotho and South Africa Establish a Join Technical Committee on the Limpopo River (Heyns, 2003:19)
1980	Interim Government Instituted in Namibia (Heyns, 2003:20)
1980	The Southern African Development Coordination Conference Launched in Lusaka Zambia (Turton, 2005:9)
1980	Lagos Plan of Action to develop water resources agreed on by the African Ministers Council on Water (AMCOR)
1983	Agreement between South Africa and Botswana on the shared Limpopo Basin establishing the Joint Permanent Technical Committee (Heyns 1995 and Pallet, 1997, cited in Els and Rowntree, n.d).
1983	Tripartite Permanent Technical Commission established between Mozambique, South Africa and Swaziland in February (Mohamed, 2003:222)
1984	Water formally became a political agenda in the fourth SADCC Consultative Conference in Zambia due to water scarcity and drought experienced around the time (Turton, 2005:9)
1986	Treaty establishing the Joint Permanent Technical Commission between Lesotho and South Africa on the Limpopo river signed on 24th October (Heyns, 2003:19, Turton, 2005:11).
1986	Limpopo Basin Permanent Technical Commission (LBPTC) established by states of the Limpopo river namely Mozambique, South Africa and Zimbabwe (Heyns 1995 and Pallet 1997, cited in Els and Rowntree, n.d). Mohamed includes Botswana in this agreement (Mohamed, 2003:221). This commission did not take off (Mohamed, 2003:221).
1987	Lesotho Highlands Water Project Started (Heyns, 2003:19)
1987	South Africa and Interim Government of Namibia entered into agreement to cooperate on the waters of the Orange River (Heyns, 2003:20, Turton, 2005:11).
1987	The ZACPLAN Agreement signed in Harare Zimbabwe in May of that year between Botswana, Mozambique, Tanzania, Zambia and Zimbabwe (Salewicz, 2003:117)
1989	Agreement between South Africa and Botswana on the shared Limpopo basin evolved to a Joint Permanent Technical Commission (Heyns 1995 and Pallet, 1997 cited in Els and Rowntree, n.d).
1990	Independent Namibia endorsed the previous agreements between South Africa and Portugal. The Permanent Joint Technical Commission was reinstated. (Heyns, 2003:11)
1992	Permanent Water Commission established between Namibia and South Africa on the Orange River (Heyns, 2003:20).

1992	Treaty signed between South Africa and Namibia to establish a joint Irrigation Authority supplied from the Orange River (Heyns, 2003:22).
1994	Tripartite agreement established the Permanent Okavango River Basin Commission (OKACOM). The agreement was between Angola, Botswana and Namibia. (Heyns, 2003:18)
1994	Namibia Proposed the establishment of a Joint Permanent Orange River Commission between basin states (Heyns, 2003:20).
1994	SADC Water Sector Coordinating Unit created in Lesotho (Heyns, 2003:23)
1995	SADC Water Protocol signed in Johannesburg at the SADC August Summit (Mohamed, 2003:214)
1995	Limpopo Basin Permanent Technical Commission (LBPTC) revived at discussions held in August in Pretoria (Mohamed, 2003:221)
1996	Joint Water Commission signed in Maputo Mozambique between South Africa and Mozambique relating to common waters including the Limpopo
1997	SADC Water Protocol amended to take into account the UN Convention on the Law of Non Navigational Uses of International Water Courses (Ramoeli, 2002 cited in Turton, 2005:14)
2001	The Orange-Senqu Comission (ORASECOM) was established by Botswana, Lesotho, Namibia and South Africa at Okapuka in Namibia (Heyns, 2003:21).

Appendix C: International Water Cooperation Experience

The Global Instruments

On the global level, transboundary rivers fall within the 1997 UN Convention on the Law of Non Navigational Uses of International Water Courses (United Nations, 1997). The convention was put in place in the spirit of advancing international law as it would assist in promoting and implementing the purposes and principles of the United Nations Charter as contained in article 1 and 2. Article 1 of the United Nations charter stipulates that the United Nations is responsible for maintaining international peace and security, the development of friendly relations among nations, the achievement of international cooperation in solving international problems and the harmonization of actions of nations. Article 2 of the United Nations charter contains the principles within which the above will be achieved, which are mainly based on sovereign equality of nations.

The convention outlines six general principles on which the convention is based in addition to the principles of the United Nations charter, as follows:

a) Equitable and reasonable utilization and participation

b) Consideration of the geographic, hydrological, climatic and ecological conditions; social and economic needs, population dependent on the watercourse, the effects of the uses of the water course, existing and potential uses and availability of alternatives in order to determine equitable and reasonable utilization.

c) Obligation not to cause significant harm

d) General obligation to cooperate

e) Regular exchange of data and information and

f) The recognition of the relationship between different kinds of uses.

The convention also covers other issues like the procedures for notification of water course states for planned measures by a watercourse state; and the protection, preservation and management of watercourses.

In order for the convention to come into force, the final clauses of the convention, specifically article 36 (1), states that the convention will enter into force after 35 states ratify the treaty. WWF International reported that the convention was short of 18 parties for the convention to enter into force (WWF, 2009).

International water cooperation also draws heavily from the Helsinki rules. These are a set of principles that act as guidelines that can help to reduce confrontation between states sharing

international rivers and enhance cooperation. Promulgated in 1966, the Helsinki rules promote fairness in the distribution of water by taking into account the economic and social situation in the basin states. The overriding principle of the rules is that states within the basin are entitled to a reasonable and equitable share of water from an international basin (Pallet, 1997:64).

Another international instrument not directly concerned with international rivers, but which is very important in the Okavango as a wetland, is the Ramsar Convention on Wetlands of International Importance. This convention provides the framework for international cooperation for the protection of wetlands. The United Nations, Educational Scientific and Cultural Organisation (UNESCO), is the depository of the convention with the secretariat being administered by the International Union for the Conservation of Nature (IUCN) and the International Waterfowl and Wetlands Research Bureau (IWRB) (Swatuk, 2003:121).

Water Cooperation: Continental Experience

A 2003 World Bank study puts the number of international rivers in Africa at 55 (Sadoff *et al.*, 2003: 4). This does not include the number of lakes that straddle international boundaries like Lake Malawi, Lake Victoria and others. According to the World Bank, every country in Africa has an international river within its territorial boundary (Sadoff *et al.*, 2003: 8). As can be seen from this situation, continent wide, this becomes a mammoth task when it comes to coordinating the utilization and management of transboundary rivers considering that 41 countries have 2 or more transboundary rivers, while 15 countries have 5 or more (Sadoff *et al.*, 2003:8). Africa is home to some of the most contested transboundary rivers. The Nile river is one example where Egypt and Sudan are basing their legal claims on the River Nile from a colonial agreement in 1959 (Timmerman, 2005:6). However, the situation has changed, with more upstream riparian making claims to the same water. The population increase along the river is a further complication, growing at the rate of 2-3% per year (Timmerman, 2005: 6) in addition to poverty and ecosystem degradation (Tesfaye, 2005:1). There is however to the knowledge of the author, no continental wide convention or protocol on transboundary rivers. The only mention of water on a continental level is in connection with supply and sanitation in 2002 within the context of the Abuja Ministerial Conference on Water (Salman, 2002).

Water Cooperation: The Southern Africa Experience

Southern Africa is home to 15 international river basins (Turton 2002). Unlike the continental body, the Southern African Development Community (SADC) has been actively engaged in the management of transboundary rivers coming up with a protocol in 1995 and impressively beating the United Nations by about 2 years. This came as a result of the recognition that there was so much interconnectedness among countries when it came to international rivers

with 70% of the regional surface water shared between two or more states. There was a further realization that drought was and still remains a real threat to the region in terms of the livelihoods of the majority of southern Africans.

The SADC Water protocol contains the provisions for the establishment of the River Basin management institutions for shared watercourse system in article 3. This protocol requires that member states establish appropriate institutions in each basin, whose objectives are to:

a) Develop a monitoring policy for the shared watercourse system
b) Promote the equitable utilization of the shared watercourse system
c) Formulate strategies for the development of the shared watercourse system
d) Monitor the execution of the integrated water resource development plans in the shared watercourse system

The functions of these institutions have been detailed in Article 5 some of which are:

a) Monitoring compliance with water resource legislation and where necessary recommending amendments and/or the introduction of new legislation.
b) Functions with regard to research, information and data handling
c) Water control and utilization in the shared watercourse
d) Environmental protection.

The protocol, *unlike* the UN Convention, came into force on the 29th September 1998. It was revised in 2000 with the amended protocol coming into force in September 2003 (Ramoeli, 2007). According to Ramoeli (2007), the following is the progress in terms of the establishment of the International River Basin Organisations in the region.

Name of River Basin	**Progress / Name of Institution**	**States party**[10]
Zambezi	ZAMCOM (2004)	Angola, Namibia, Botswana, Zimbabwe, Mozambique, Zambia, Malawi and Tanzania
Orange Senqu	ORASECOM (2000)	Namibia, Botswana, South Africa and Lesotho
Limpopo	LIMCOM (2003)	Botswana, South Africa,

[10] Part of the data fro the States Party taken from Turton (2003).

		Zimbabwe and Mozambique
Okavango	OKACOM (1995)	Angola, Namibia and Botswana
Pungwe	Work ongoing	Mozambique and Zimbabwe[11]
Inco - Maputo	Water Sharing Agreement (2002)	Mozambique, South Africa and Swaziland
Congo River	TBD	Angola, Cameroon, Central African Republic, Congo, Democratic Republic of Congo, Burundi, Rwanda, Tanzania and Zambia
Umbeluzi	Work Ongoing	Mozambique and Swaziland
Cunene / Cuvelai	Work Ongoing	Angola and Namibia
Rovuma	2006	Malawi, Mozambique and Tanzania

Additionally, the Southern Africa Development Community has a 25 year vision for water which guides water policy in the region and a Regional Strategic Action Plan (Ramoeli, 2007). The regional strategic action plan has four clusters as follows:

a) Water Governance

b) Regional Water resource planning and management

c) Infrastructure Development Support

d) Capacity building support for integrated water resource management (IWRM)

The Okavango River Basin Commission was one of the first river basin organizations to be established and in many ways a precursor to the practice in the region.

[11] Data from this row to the end of the column on states sharing the rivers from Heyns (2003) "Water Resources Management in Southern Africa" in Nakayama (ed) *International Waters in Southern Africa* UNU Press. Tokyo.

Bibliography

Alam, U, Z. 2002. "Questioning the water wars rationale: a case study of the Indus Waters Treaty". in *The Geographical Journal*, 168[4]341–353

Alexander, J.C. and Colomy, P. 1985. "Toward Neo-functionalism" Sociological Theory, Vol. 3, No. 2 (Autumn, 1985), pp. 11-23

Andreini, M., Murenga, K. and Wilbanks T. 2007. *Mid-Term Programmatic Evaluation Of Usaid/Southern Africa's Program To "Improve Management Of Shared River Basins*". Report to USAID Southern Africa.

Angula, H.K. 2003 "Special Message – Namibia and Cooperation in the Okavango Basin" in *Transboundary Rivers, Sovereignty and Development: Hydropolitical Drivers in the Okavango River Basin*. African Water Issues Research Unit (AWIRU) and Green Cross International.

Ashton, P. 2000. "Southern African Water Conflicts: Are They Inevitable or Preventable?" In Solomon, H. & Turton, A.R. (Eds.) *Water Wars: Enduring Myth or Impending Reality? African Dialogue Monograph Series No. 2.* Pp 65-102. Durban: ACCORD Publishers.

Ashton, P. 2003. "The search for an equitable basis for water sharing in the Okavango River Basin" published as Chapter 7 in "*International Waters in Southern Africa*", M. Nakayama (Ed.) United Nations University Press. New York

Ashton, P.J. & Neal, M.J. 2005. "Public involvement in water resource management within the Okavango River basin" published as Chapter 9 in *"Public Participation in the Governance of International Freshwater Resources"*, C. Brusch, L. Jansky, M. Nakayama & KA Salewicz, Eds, United Nations University, Tokyo. Pages 169-195.

Baylis, J., Smith, S., Owens, P. (eds) 2008. *The Globalization of World Politics – An introduction to International Relations.* Oxford University Press. Oxford.

"Botswana Seeking Diversity" *Africa Research Bulletin*, 2008. Feb 16th – March 15th 2008. Blackwell Publishing

Buzan, B. 1991. *People, States & Fear: An Agenda For International Security Studies in the Post-Cold War Era*. 2nd Edition . Hertfordshire: Harvester Wheatsheaf.

Carlsnaes, W., Risse, T., and Simmons, B.A. 2002. *Handbook of International Relations*. Sage Publications, London.

Chenje, M., 2003. "Hydropolitics and the quest for the Zambezi River-Basin Commission" in Nakayama, M. (ed). *International Waters in Southern Africa.* United Nations University Press. New York.

Collelo, T.. 1991. (ed) Angola: *A Country Study*. United States GPO. Washington (online) http://www.questiaschool.com/read/28183025 Accessed: 20th August, 2009.

Conciliation Resources, 2009. *Country Profiles*. (online) http://www.c-r.org/our-work/accord/angola/profiles.php. accessed on September 22, 2009.

Dahl, H.E. 1981. "Economic and Social Development in Botswana 1966-78," in *Papers on the economy of Botswana*, Charles Harvey ed., London : Heinemann, 1981.

David, M. & Douglas, M. 2002. "From farming fields to river basin management: Implications of scale" In Turton, A.; Henwood, R. (Eds.), *Hydropolitics in the developing world: A Southern African perspective*. Pretoria, South Africa: African Water Issues Research Unit.

Davis. R.K. 2000. "Report on Water Resources and Water Resource Management in Namibia" in Fuller, B. and Prommer, I. (ed) *Population – Development - Environment in Namibia: Background Readings University of Namibia and International Institute for Applied Systems Analysis*.

de Wet, S., Namene, L., Segomelo, P., Molefi T., Pinheiro I., Chonguica, E. 2008. "Transboundary River Basin Management – The OKACOM Initiative" in Ardakanian, R. and van der Schaaf, C. *Proceedings of the International Workshop on Institutional Capacity Development in Transboundary Basins Lessons learned from practical experience* BMZ, Bonn 10-12 November 2008

Dunne, T. and Schimdt, B.C. 2008. "Realism" in Baylis, J., Smith, S., Owens, P. (eds) 2008 *The Globalization of World Politics – An introduction to International Relations.* Oxford University Press. Oxford.

Dunne, T. 2008. "Liberalism" in Baylis, J., Smith, S., Owens, P. (eds) 2008 *The Globalization of World Politics – An introduction to International Relations.* Oxford University Press. Oxford.

Els, A.J.E., and Rowntree K.M., n.d. *Water Resources In The Savannah Regions Of Botswana* (Online) http://www.savannas.net/botswana/ruhydro.htm. accessed 23 September 2009.

Environmental News Service. August 18, 2008. *World water crisis underlies world food crisis (*Online) http://www.ens-newswire.com/index.asp. accessed on October 26, 2009.

Ethos Water, 2009. *The World Water Crisis* (online) available at: http://www.worldwaterday.net/index.cfm?objectid=E38C787B-F1F6-6035-B9D8092D300B7548. Accessed on October 26, 2009

Glaser, C. L. 1997. "The Security Dilemma revisited" in *World Politics*, 50[1] Fiftieth Anniversary Special Issue (Oct., 1997),171- 201

Government of Botswana. 1996. Vision 2016.

Government of Botswana. 2001 *Botswana, Initial National Communication to the United Nations Framework Convention on Climate Change.* Ministry of Works, Transport and Communication.

Government of Namibia, 2007.

Green Cross, n.d. *Transboundary Basin Sub projects.*

Haas, E. 1983. "Words can hurt you; or, who said what to whom about Regimes" in Krasner S. (ed) *International Regimes* Cornell University Press, Ithaca, NY.

Harry Oppenheimer Okavango Research Centre (HOORC), 2009. http://www.orc.ub.bw/

Hasenclever, A., Mayer, P., and Rittberger, V. 1997. *Theories of International Regimes*. Cambridge Studies in International Relations. Cambridge University Press. Cambridge.

Hasler, R., n.d. *Political Ecologies of Scale and the Okavango Delta: Hydro-politics, Property Rights and Community Based Wildlife Management.* Research for Land and Agrarian Studies, University of Western Cape. Cape Town.

Hellmuth, M.E,. 2000. "Water Resources of Namibia" in Fuller, Ben and Prommer, Isolde (ed) Population – Development - Environment in Namibia: Background Readings University of Namibia and International Institute for Applied Systems Analysis.

Heyns, P. 2003. "Water resources management in Southern Africa" in Nakayama, Mikiyasu (ed). *International Waters in Southern Africa.* United Nations University Press. New York.

Heyns, P. 2007a. "OKACOM, an instrument for cooperation, peace and prosperity (part 1)" in *Okaflow* Issue 5, July 2007.

Heyns, P.S.vH., 2007b. "Governance of a shared and contested resource: A case of the Okavango River Basin" in *Water Policy* 9[Supplement 2]149-167.

Institute for Water and Water Shades. 2009. "Africa, International River Basins Register" (online) available at http://www.transboundarywaters.orst.edu/publications/register/tables/IRB_africa.html. Oregon State University.

Integrated River Basin Management Project Website, 2005. http://www.irbm.co.bw/In%20Action%20OKACOM%20establishes%20Secretariat.htm. Accessed on September 21, 2009.

International Union for the Conservation of Nature (IUCN). 2006. *Okavango Delta Management Plan (ODMP)* (online). http://www.iucnbot.bw/ODMP/index.html. Accessed on 23 September 2009.

"Jobs and widespread wealth elude even a well managed economy" *Afro Barometer*, 2009. Briefing paper no.62.

Kant, I., 1795. *Perpetual Peace – A philosophical Sketch* (online) http://www.mtholyoke.edu/acad/intrel/kant/kant1.htm. accessed 22 October, 2009.

Keohane, R., O. 1989. *International Institutions and State Power*. West View Press. Colorado.

Kgosi Tawana II, 1998. In response to the government's letter to Delta community groups concerned about the Okavango pipeline project. (online) <http://www.mindspring.com/~okavango/okletter.html> Accessed on April 8, 2009.

Koremenos, B., Lipson, C., and Snidal, D. 2001. "The Rational Design of International Institutions" in *International Organisation* 55[4]761-798.

Krasner, S., 1983. (ed) *International Regimes* Cornell University Press, Ithaca, NY.

Krasner, S., 1983. "Structural Causes and Regime Consequences: Regimes as intervening variables" in Krasner Stephen (ed) *International Regimes* Cornell University Press, Ithaca, NY.

Kulindwa, K., and Lein, H., 2008. "Water and Poverty: the inextricable link" in Hemson, David., Kulindwa, Kassim., Lein Haakon and Mascarenhas, Aldolfo (eds) *Poverty and Water – Explorations of the reciprocal relationship.* Comparative Research Programme on Poverty (CROP). Zed Books. London.

"Landmark Support from the AfDB" 2009 *Africa Monitor,* 14[8]

Lange, G., and Wright, M., 2002. Sustainable development in mineral economics: The example of Botswana. CEEPA Discussion Paper No. 3, University of Pretoria. Pretoria.

Lawrence, R.Z. 1996 *Regionalism, Multilateralism and Deeper Integration*. – The Brookings Institution, Washington DC

Levine. J.P., 1996 "The Cases study as a Jury research Methodology" in *Journal of Criminal Justice* [24]4:351-360.

Lipson, C. 1991. "Why are some international agreements informal" in *International Organization* 45[4]494-538.

Little, R., 2008. “International Regimes” in Baylis, John., Smith, Steve., Owens, Patricia. (eds) 2008 *The Globalization of World Politics – An introduction to International Relations.* Oxford University Press. Oxford.

Malawi Government, 2009. *Population and Housing Census 2008.*

Martin, L.L., 1992 “Interests, Power and Multilateralism” in *International Organization* 46[4]765-792.

Mathe, S., 2009. “Diamonds are not forever” in New African March 2009. IC Publications.

Mbaiwa, J.E., 2004. “Causes and possible solutions to water resource conflicts in the Okavango River Basin: The case of Angola, Namibia and Botswana” in *Physics and Chemistry of the Earth* 29(2004) 1319-1326.

Mbaiwa, J.E., Ngwenya, B.N. and Kgathi, D.L. 2008. “Contending with unequal and privileged access to natural resources and land in the Okavango Delta, Botswana” in *The Singapore Journal of Tropical Geography. 29[2008]155-172.*

Mearsheimer, J. 1995. "The False Promise of International Institutions," in *International Security*, 19[3]5-49.

Meinier, B., Qwist-Hoffmann, P.,Vogel, H. and Ramoeli, P. 2009. “Benefit sharing and capacity development in SADC: a multi-dimensional approach” Presentation made at the Stockholm World Water Week, August 16-22, 2009. German Development Cooperation (GTZ).

Mohamed, A. E., 2003. Joint development and cooperation in international water resources” in Nakayama, M. (ed). *International Waters in Southern Africa.* United Nations University Press. New York.

Moswete. N. (no date) Department of Environmental Science, University of Botswana

Mutoti, G. 2001. *20 Years of Development in Southern Africa – A sectoral review of regional Integration in SADC.* The Regional Economic Development Integration (REDI) Programme of Southern Africa Research and Documentation Centre (SARDC). Harare.

Nakayama M. 2003. “Institutional Aspects of International Water-system Management” in Nakayama, M. (ed). *International Waters in Southern Africa.* United Nations University Press. New York.

Nakayama, M. (ed) 2003. *International Waters in Southern Africa.* United Nations University Press. New York.

Nel, P., Taylor, I. and van der Westhuizen, J. 2001. *South Africa’s multilateral diplomacy and Global Change: The Limits of Reformism.* Aldershot: Ashgate

Ngoma, N. 2005. *Prospects for a Security Community in Southern Africa – An analysis of Regional Security in the Southern Africa Development Community.* Institute for Security Studies (online book) Available at: http://www.iss.co.za/index.php?link_id=31&slink_id=199&link_type=12&slink_type=12&tmpl_id=3. Accessed on October 22, 2009.

North Carolina Office of Environmental Education, 2009. (Online) http://www.eenorthcarolina.org/public/ecoaddress/riverbasinsmain.htm. Accessed on 6th September 2009.

Okavango River Basin Commission Agreement (OKACOM), 1994. Agreement between the Government of the Republic Angola, the Republic of Botswana and the Republic of Namibia.

Ostrowoski, J. 2002. *Does Democracy Promote Peace*. Mises Institute. Alabama. Online Version found at: http://mises.org/article.aspx?Id=665&FS=Does+Democracy+Promote+Peace? Accessed on 22nd October, 2009.

Pallet, J., (*ed*) 1997. *Sharing Water in Southern Africa*. Desert Research Foundation of Namibia. Publications on Water no 1, SIDA Stockholm.

Pinheiro, I., Gabaake, G. and Heyns, P. 2003. "Cooperation in the Okavango river basin The OKACOM perspective" in Turton, Anthony., Ashton Peter., and Cloete Eugene (ed). *Transboundary Rivers, Sovereignty and Development: Hydropolitical Drivers in the Okavango River Basin*. African Water Issues Research Unit (AWIRU) and Green Cross International.

Porto, J.G., and Clover, J. 2003. "The Peace divided in Angola: Strategic implications for Okavango Basin Cooperation" in Turton, Anthony., Ashton, Peter and Cloete, Eugene. (ed) Transboundary Rivers, Sovereignty and development: Hydropolitical drivers in the Okavango River Basin. African Water Issues Research Unit and Green Cross International (GCI).

Rahm, D., Swatuk, L., and Matheny E. 2006. "Water Resource Management in Botswana: Balancing Sustainability and Economic Development" in *Environment, Development and Sustainability* 8[1] / February, 2006 Springer Netherlands.

Ramoeli, P.S. 2007. *SADC Regional Water Resources Management and Development – An Overview*. Presentation at the DANIDA International Water Conference. KolleKolle Conference Centre – Copenhagen.

Rittberger, V. 1993. *Regime Theory and International Relations* Clarendon Press. Oxford.

Rosato, S. 2003. “The Flawed logic of democratic peace theory” in *American Political Science Review* 97[4]585-602.

Ross, M.L., 2004. “How do natural resources influence civil war? Evidence from thirteen cases” in *International Organization* 58[1]:35-67.

Ruggie, J.G. 1998. *Constructing the world polity: Essays on International Institutionalisation*. London. Routledge

SADC. 1995. *The Southern African Development Community Protocol on Shared Watercourse Systems*. Botswana: Southern African Development Community.

Sadoff, C.W., Whittington, D., and Grey, D. 2003 *Africa’s International Rivers: An Economic Perspective* The World Bank. Washington DC.

Salewicz, K.A. 2003. “Building the brige between decision support tools and decision making” in Nakayama, Mikiyasu (ed). *International Waters in Southern Africa.* United Nations University Press. New York.

Salman M.A.S., 2002. “The Abuja Ministerial Declaration on Water: A milestone or just another Statement” in *Water International* 27[3].

Scudder T. 2003. “Botswana’s Southern Okavango Integrated Water Development Project and Hydro-Québec’s Grande Baleine Project.” Unpublished Manuscript. (online) http://www.hss.caltech.edu/~tzs/Okavango%20&%20Hydro-Quebec%20Cases.pdf. Accessed on October 13, 2009.

Simmons, B.A. and Martin L.L. 2002. “International Organizations and Institutions” in Carlsnaes, Walter., Risse, Thomas., and Simmons, Beth A. *Handbook of International Relations*. Sage Publications, London.

Snyder, G. H. 1984. “The Security Dilemma in Alliance Politics” *World Politics*, 36[4]461-495

Swatuk, L. 2003. Kant and should: Strategic thoughts about ‘wise use’ of the Okavango delta system” in Turton, Anthony., Ashton Peter., and Cloete Eugene (ed). *Transboundary Rivers, Sovereignty and Development: Hydropolitical Drivers in the Okavango River Basin*. African Water Issues Research Unit (AWIRU) and Green Cross International.

Tellis, W. 1997. “Introduction to case study” in *The Qualitative Report [3]*2. Available: http://www.nova.edu/ssss/QR/QR3-2/tellis1.html. accessed 26 October, 2009.

Tesfaye, A. 2005. *Hydropolitics and Regional Stability in the Nile Basin* William Paterson University, New Jersey.

The Namibia Economist, 29 Septermber 2006

Timmerman, J.G. 2005 “Transboundary River Basin Management: The Nile Basin Case Study” report of the NeWater Project *New Approaches to Adaptive Water Management Under Uncertainty.* Institute for Inland Water Management and Waste Water Treatment (RIZA).

Turton, A.R. 2000. Water Wars in Southern Africa: Challenging Conventional Wisdom. In Solomon, H. & Turton. A.R. (Eds.) *Water Wars: An Enduring Myth or Impending Reality? African Dialogue Monograph Series No. 2.* Durban: Accord Publishers.

Turton, A.R., 2002. “Hydropolitics: The Concept and its limitations” in Turton, Anthony and Henwood Roland (eds), 2002. *Hydropolitics in the Developing World – A Southern African Perspective.* African Water Issues Research Unit (AWIRU), University of Pretoria, Pretoria

Turton, A. R., 2003. “The hydropolitical dynamics of cooperation in Southern Africa, A strategic perspective on institutional development in international river basins” in Turton, Anthony., Ashton Peter., and Cloete Eugene (ed). *Transboundary Rivers, Sovereignty and Development: Hydropolitical Drivers in the Okavango River Basin*. African Water Issues Research Unit (AWIRU) and Green Cross International.

Turton, A. R., 2003b. “An Overview of the Hydropolitical dynamics in the Orange River Basin” in Nakayama, Mikiyasu (ed). *International Waters in Southern Africa.* United Nations University Press. New York.

Turton, A.R., Ashton P., and Cloete E. (ed). 2003. *Transboundary Rivers, Sovereignty and Development: Hydropolitical Drivers in the Okavango River Basin*. African Water Issues Research Unit (AWIRU) and Green Cross International.

Turton, A.R., Ashton P., and Cloete E. 2003 “Introduction to the Hydropolitical drivers in the Okavango River Basin” in Turton, Anthony., Ashton Peter., and Cloete Eugene (ed). *Transboundary Rivers, Sovereignty and Development: Hydropolitical Drivers in the Okavango River Basin.* African Water Issues Research Unit (AWIRU) and Green Cross International.

Turton, A.R.,2005. “Hydro hegemony in the context of the Orange River Basin” Paper delivered at a Workshop hosted by Kings College and School of Oriental and African Studies (SOAS).

United Nations, 2000. UN Cartographic Section, *Map of the Okavango River Basin*, No. 4032, available at: http://www.unhcr.org/refworld/docid/460a37c92.html [accessed 10 October 2009]

UNESCO and Green Cross International. 2003. *From Potential conflict to Cooperation Potential – Prevention and resolution of water related conflicts.* Paris & Geneva.

United Nations Development Programme. 2008 . Human Development Index

United Nations World Water Development Report 3. 2009.

United Nations, 1945. Charter of the United Nations

United Nations, 1997. Convention on the Law of Non Navigational Uses of International Water Courses

United States Agency for International Development (USAID), 2007. *Mid-term programmatic evaluation of USAID/Southern Africa's program to "improve management of shared river basins"* Report to USAID Southern Africa, 10 July, 2007.

van Langenhove, G. and Mufeti, P. 2008 . "Experiences with space technology in management of 2008 flood adversity in dry river delta in central northern Namibia" presented at the UN-SPIDER workshop "Disaster Management and Space Technology –Bridging the Gap", Bonn, Germany, 13-15 October 2008.

Wardell-Johnson, G. 2000. Biodiversity and Conservation on Namibia into the 21st Century. Pages 17-45 in B. Fuller and I. Prommer, *Population-Development-Environment in Namibia: Background Readings.* Laxenburg, Austria: IIASA, IR-00-031

Water Wars. 1997. Journeyman pictures. London. (Online) http://www.youtube.com/profile?user=journeymanpictures&view=videos&query=water+wars+Okavango. (online) accessed: 23 September, 2009.

Watson, M. 2005. Foundations of International Political Economy. Basingstoke. Palgrave MacMillan.

Wester, P. and Warner, J. "River basin management reconsidered" In Turton, A.; Henwood, R. (Eds.), *Hydropolitics in the developing world: A Southern African perspective*. Pretoria, South Africa: African Water Issues Research Unit. pp.61-71

Whiteside, M. 1997. "Encouraging Sustainable Family Sector Agriculture in Botswana" Project on Agriculture Services Reform in Africa. Cooperation for Research, Development and Education (CORDE), Gaborone.

World Food Programme. *Angola, A prayer for Peace* (1992). Directed by Gillian Hazell. Rome. World Food Programme [video: DVD]

World Wide Fund (WWF) for Nature. 2009. *UN Water Courses Convention* (online) http://www.panda.org/what_we_do/how_we_work/policy/conventions/water_conventions/un_watercourses_convention/. Accessed October 29, 2009.

Zinnes, D. A. 2004. “Constructing Political Logic – The Democratic Peace Puzzle” in *Journal Of Conflict Resolution*, 48[3]430-454.

Personal Communication

Chonguica E.M.W., Personal Email Communication, 2nd and 14th April, 2009.

Heyns, P., Personal Email Communication, 17th September 2009

Swatuck, L., Personal Email Communication, 8th October, 2009